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## 5 Reduction/Elimination of Generation of Waste

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### All Regions/Countries, Parties of the Basel Convention

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#### UN Region: Africa

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##### Egypt

*Year* 2007

*Policies* Strategies related to the ESM of HW has been adopted"  
1. National Strategy for Waste Management;  
2. National Strategy for Cleaner Production; and  
2. National Environmental Action Plan 2002-2017.

Policies adopted for hazardous waste generators include:

1. Reduction of hazardous waste at source;
2. Identification of hazardous waste;
3. Safe on-site storage hazardous waste;
4. Labeling of hazardous waste;
5. Reporting on generation of hazardous waste; and
6. On-site treatment of hazardous waste.
7. National plan for Implementation of Stockholm convention.
8. Industrial pollution prevention program.
8. Inventories for obsolete chemical and pesticides.

*Legislation* Egyptian Environmental Law No. 4/1994 and its Executive Regulations present the overall legal framework for hazardous waste management. in addition to laws 93/1961 and 48/198; and the Egyptian Environment Affairs Agency has adopted recently some guidelines for managing the overall hazardous waste management system in addition to that adopted by the Basel Convention, these guidelines covers: transportation, on-site interim storage, identification & characterization, permitting system, recycle and final disposal.

*Incentives* Financial plan for minimization activities  
Economic tools, (discharge fees, tax exemption  
Cost/benefit analysis.

*Industry* Establishing a national program for modernization of the Egyptian industry;  
National strategy for cleaner production; and  
Establishing of the National center for cleaner production.

*Others* Enhancing partnership with the private sector;  
Increase capacity building programs; and  
Involvement of NGO's in hazardous waste management.

##### Gambia

*Year* 2007

*Policies* Waste Management Bill to be enacted soon.

*Legislation*

*Incentives*

*Industry*

*Others*

##### Madagascar

*Year* 2007

**Policies** In preparation.

On 18 June 1998, the National Committee for the Management of hazardous wastes (GNGPC) was officially created (Decret N°98-444). This committee has been, since this date, the official national mechanism responsible for chemical management in terms of safety.

**Legislation**

A National Law to reduce hazardous wastes is currently being elaborated.

**Incentives**

A National Law Ecotax is currently being elaborated.

**Industry**

Decree of application MECI, Law N°99-954 of 15/12/99. (Accountability of investments towards the environment).

**Others**

Le Ministère de l'Environnement, des Eaux et Forêts est en cours d'élaboration de la politique nationale de gestion de déchets dangereux ou non dangereux (année 2005) .

**Mali**

**Year** 2007

**Policies**

- National policy of sanitation has been signed by the Jan 28th,2009 ministers meeting;
- National Strategy of Solid waste management adopted by the same meeting, Jan 28th,2009 ;
- National Strategy of Hazardous waste management adopted by the same meeting, Jan 28th,2009

**Legislation**

- Law N° 01- 020 of May 30th , 2001 related to pollution and nuisances;
- Law N° 08- 033 of August 11th , 2008 related to classified constructions or sites for the protection of our environment;
- Decree N° 01-394/P-RM of September 06th, 2001, organizing solid waste management;
- Decree N° 07-135/P-RM of April 16th, 2007, précisising hazardous waste list;

**Incentives** No.

**Industry** No.

**Others** No.

**Morocco**

**Year** 2007

**Policies**

Le Maroc a lancé un projet en vue de mettre en place un centre de traitement et d'élimination des déchets (Centre National d'Elimination des Déchets Spéciaux CNEDS). Le site pour l'installation de ce centre a été choisi et l'étude de faisabilité du projet ainsi que l'étude d'impact ont été réalisées.

Dans le cadre de la convention de Stockholm sur les POPs, le Maroc a bénéficié d'un don du GEF pour l'élaboration du plan de mise en œuvre de ladite convention, notamment un plan d'action pour la gestion écologiquement rationnelle des déchets POPs

The CMPP (Centre Marocain de Production Propre) plays a coordinating as well as catalytic role of a natural cleaner production market by means of :

The promotion and dissemination of the concept of sustainable ecological industrial development;

improvement of the performance and competitiveness of the enterprise; and

making public opinion sensitive and aware of cleaner production technologies.

### **Legislation**

Législation en matière de gestion des déchets :

- loi cadre sur la protection et la mise en valeur de l'environnement promulguée et en vigueur depuis 2003 qui vise l'obligation d'une gestion écologiquement rationnelle des déchets.

- loi 28-00 sur la gestion et l'élimination des déchets qui a été promulguée en décembre 2006.

- Décret n°2-07-253 du 18 juillet 2008 portant classification des déchets et fixant la liste des déchets dangereux.

Quatre décrets d'application de cette loi sont en cours de préparation, à savoir:

- Décret sur les décharges;

- Décret sur les déchets médicaux et pharmaceutiques ;

- Décret sur le contrôle des mouvements transfrontières des déchets ;

- Décret sur la co-incinération des déchets.

- Directives et plans élaborés pour une gestion écologiquement rationnelle des déchets

- Plan directeur pour la gestion des déchets dangereux

- Programme national d'assainissement liquide

- Programme national de gestion des déchets ménagers

- Guide sur la gestion des déchets ménagers, directives sur les déchets hospitaliers, guide sur le choix du site des décharges contrôlées pour les déchets ménagers, guide pratique sur l'amélioration de la gestion des déchets hospitaliers, quatre directives en cours de préparation en collaboration avec le centre de formation et de transfert de technologie de la convention de Bâle du Caire.

- Plan National de la mise en œuvre de la Convention de Stockholm

### **Incentives**

Creation within the Department of Environment of the Fund for Industrial Depollution (FODEP). The Fund is destined for industrial enterprises willing to engage in depollution projects. 80% of the cost of the project can be financed by FODEP according to the project type:

Integrated project (20% donation and 20-60% of credit at medium or at long term and;

Approved Project (40% donation and 20-40% of credit at medium or at long term).

\* Le centre marocain de production propre (CMPP) qui a pour attribution la sensibilisation et la formation des industriels pour minimiser la production des déchets à la source.

### **Industry**

Certaines unités industrielles ont adopté le concept de production propre en utilisant de nouvelles technologies pour réduire à la source la production des déchets notamment celles qui ont bénéficié du FODEP.

### **Others**

Some wastes are incinerated at the furnace of cement factories and;

A project to create a waste stock market is currently being developed.

Présence d'unités industrielles spécialisées dans le recyclage de déchets, notamment, plastique, papier, verre, déchets de textiles

Création d'une coopérative spécialisée dans le recyclage des déchets

## **Mozambique**

**Year** 2007

### **Policies**

### **Legislation**

The Article 9, Decree 13/2006, the Regulation of Waste Management, obliges the producers of waste to minimize the production of their waste and the details how

that waste should be minimized will be set in waste management guidelines which still in preparation . In addition to that, the Environmental Law 20/97 imposes strict liability on people who damage the environment. The government has responsibility to set the amount for compensation and the person causing environmental damage is responsible to pay the amount needed to repair or to compensate the affected environment. The provision does not related to hazardous wastes only. On the other hand, the General Guideline for Environmental Impact Assessment proponents are obliged to present in EIA details about the waste to be produced and minimization measures of that waste before the project is implemented.

***Incentives***

***Industry***

Many companies and industries are ISO systems certified and have clean production technology which help in waste minimization by their own initiatives or in order to fulfill the requirements from financial institutions. On the other hand, both Cleaner Production Center and Forum Empresarial para o Meio Ambiente (FEMA) which is an Environmentally aware group representing Mozambican Industry promote environmental sound practices including waste minimization.

***Others***

**Nigeria**

***Year***

2007

***Policies***

- promotion for the adoption of cleaner production techniques
- installation of incinerators for hazardous hospital wastes.
- National Action plan on Healthcare Wastes Management

***Legislation***

- FEPA Harmful Wastes provision degree 42 of 1988;
- National Guidelines and standards for environmental pollution control in Nigeria 1990;
- FEPA (Amendment) degree No. 59 of 1991;
- Degree 86,1992 Environmental Impact Assessment
- Guidelines on Hazardous Chemicals Management
- National Environmental Standard Regulations and Enforcement Agency Act 2007.

***Incentives***

- Environmental friendly awards to industries.
- Compulsory waste audit of facilities every 3 years

***Industry***

- Installation of waste treatment facilities, e.g. incinerators, thermal de- sorption unit, waste water treatment plants
- Self- monitoring;
- Compliance programmes
- Waste Auditing

***Others***

**Rwanda**

***Year***

2007

***Policies***

- The National Environment Policy (2003)
- The National Land Policy(2004)
- The National Forest Policy (2004)
- The National Water and Sanitation Policy (2004)
- The National Energy Policy (2004)
- Strategy of reduction and/or prevention of wastes from source, sorting and selective collection of wastes.

***Legislation***

- Organic Law no 04/2005 of 08/04/2005, determining the modalities of protection, conservation and promotion of environment in Rwanda
- Organic Law no 08/2005 of 14/07/2005, determining the use and management

of land in Rwanda

- Law n°16/2006 of 03/04/2006 determining the organization, functioning and responsibilities of Rwanda Environment Management Authority (REMA).
- Law no 03/02 of 19/01/2002 bearing the creation of the Rwanda Bureau of Standards (RBS)
- Ministerial order of the Minister of Lands, Environment, Forestry, Water and Mines relating to the manufacture, importation/trade and use of plastic bags (20 August 2004).

**Incentives** Use of economic bulb to reduce electricity consumption

- Industry**
1. Every project shall be subjected to environmental impact assessment, before obtaining authorisation for its implementation. This applies to programmes and policies that may affect the environment.
  2. Cleaner Production Programme: Industries reviewed their production process, to reduce waste generation and to come up with economic benefits.

The cleaner production center will be established under the ministry in charge of commerce.

**Others**

**Senegal**

**Year** 2007

- Policies**
- Adoption of a complete legislation on the management of the network (sic);
  - Elaboration of a management plan; and
  - Development of cooperation with other programmes and awareness.

**Legislation** Environmental Code (Law 200-1-01 of 15 January 2001); Decree 282-2001 of 12 April 2001; Sanitation Code; Local Municipalities Code; and Regulation concerning management (under application).  
Decree for wasted oils

**Incentives**

- Industry**
- Awareness and information;
  - Establishment of a sanitation and security committee; if the industries have more than fifty workers.
  - Auditing and ISO certification for some industries.
  - Cooperation among industries.

**Others**

**South Africa**

**Year** 2007

**Policies** A Cleaner Production Center has been set up in South Africa to assist industry to reduce wastes and pollution;  
The Department of Environmental Affairs has promulgated the National Environment Management: Waste Act 58 of 2008 which provides for among others the following:

- The requirement for industries to produce industrial waste management plans, these plans will identify how they will implement the waste hierarchy;
- The development of a National waste management strategy, which will set targets for waste recycling;
- The national waste classification procedures are being revised which will identify a procedure for the reuse of hazardous and general wastes; and
- The identification of priority waste streams, which will then allow for certain interventions including the setting of targets for reductions, phase out or banning of

these priority wastes;

**Legislation**

- South Africa adopted the Polokwane Declaration that is targeting zero waste by 2022;
- A draft policy and regulations are being developed for the environmentally sound management of Healthcare Risk waste. This policy will include provisions for the correct separation of Health Care Risk waste from Health Care General wastes which will reduce the Health Care Risk Waste stream requiring treatment;
- A Policy which supports High Temperature Thermal Treatment of waste has been published early in 2009. This policy promotes the use of high calorific hazardous waste as an energy source in cement production, which will effectively reduce waste.
- Waste Tyre Regulations were published in 2008, these regulations require that the waste hierarchy be applied to the management of tyre waste. By utilising waste tyres to produce further products or for energy substitution in cement kilns, waste from tyres will be avoided.
- Plastic bag regulations were published in 2003 which among others requires consumers to pay for plastic bags. These regulations have effectively reduced the number of plastic carrier bags being disposed of.

**Incentives**

South Africa promulgated and is implementing plastic bag regulations which require manufacturers of flat carrier bags to pay a levy on each bag produced. A industry initiative to place a voluntary levy on the purchase of new tyres will pay for the environmentally sound management of waste tyres, which is required in terms of the Waste Tyre Regulations of 2008.

**Industry**

The waste tyre industry will pay a voluntary levy to finance the environmentally sound management of waste tyres.

**Others**

**Tunisia**

**Year**

2007

**Policies**

The National strategy on wastes has four objectives. They are: (i) to ensure that wastes management takes place without endangering public health and the environment; (ii) to encourage the reduction in wastes in both qualitative and quantitative terms; (iii) to encourage recycling and re-use of wastes; and (iv) to establish methods and infrastructure to ensure wastes disposal to the lowest possible cost in environmental and economic terms.

The National Programme for Solid Wastes Management (PRONAGDES) was launched in 1993. The aim of the Programme is to provide the country with units for the treatment of household wastes, facilities for the treatment of hazardous wastes, and produce appropriate solutions and management plans for all categories of wastes.

Ordinance by the Minister of Environment and Sustainable Development dated 23 Mars 2006 related to the establishment of center for treating hazardous wastes in Jradou and three transfer centers in Bizerta, Sfax and Gabes

The center for processing industrial and hazardous waste established in Jradou governorate of Zaghoun in Tunisia has an annual capacity of 90,000 tons. The center will process waste from all governorates of Tunisia. Three transfer centers are also established to complete the system, and limit transport distances to between 120 km and 180 km.

The main sections of the center are as follows:

- An administrative zone, with reception, office space, laboratory and car parks.

- A processing area, with installations for physico-chemical processing and solidification/stabilization.

The physico-chemical processing installation will be able to process 17,500 tons of liquid per annum.

The exploitation of this platform is intended to commence on 2008.

Implementation of pilot project: Africa Stockpile Programme for Tunisia (Total cost: 5,5 million US\$, Period: November 2005 - November 2009).

Components:

- Establishment of a functional project management unit;
- Inventory of obsolete pesticides;
- Disposal of obsolete pesticides (repackaging, transport, intermediate storage taking safe measures and export stock of obsolete pesticides to Europe for incineration);
- Set-up measures to prevent the re-emergence of obsolete pesticides and promotion of alternative pest control strategies;
- Capacity building in management of obsolete pesticides field and communication and raising awareness of sound management and rational use of pesticides.

The year 2006, reported the following actions:

- Organization of training sessions in the inventory of obsolete pesticides stocks;
- Conducting an inventory of obsolete pesticides stored in depots (around 1,200 tons in 200 stores on May- October 2006).

### **Legislation**

- Waste and waste treatment fall under the law n°96-41 of 1996 in which the following general objectives are defined: (i) prevention and reduction of wastes especially during fabrication and distribution of products (ii) valorization of wastes by re-use and recycling both as materials or energy source (iii) controlled final landfill as a last resort;
  - Decree n° 2000-2339 laying down hazardous waste list;
  - Decree n°97-1102 laying down conditions and methods for the collection and management of used bags and packaging;
  - Decree n°2002-693 (dated April 1st, 2002) laying down conditions and methods for the collection and the management of used lubricating oils and used oil filters. This decree defines the criteria and methods of recovery and regeneration of used lubricating oils, the collection and the valorization of the used oil filters;
  - Decree n°2005-3395 of 26 December 2005 laying down conditions and methods for the collection of used batteries and accumulators.
  - Following enactment of law 96-41 on wastes and the control of wastes management and disposal, legal instruments (decrees) on the management of categories of hazardous wastes, based on the polluter pays and producer recovers principles, are in the process of drafting;
  - Standards on the concentration of pollutants in the industrial wastewater (metals, heavy metals, halogenated solvents, hydrocarbons, mineral oils, phenols, etc.) before junction to the public sewage works or abandon in the hydraulic and maritime property;
  - Decree n° 1991-2005, dated 11 July 2005, related to environmental impact assessment studies, an specifying the types of plants for which such studies are required and those which are governed by a ‘terms and conditions’ document. The environmental impact assessment (EIA) mandatory is obligatory for all activities (industrial, agricultural or commercial) that cause risks for pollution or degradation of the environment.
- Decree n° 2005-2317 dated 22 August 2005 related to the establishment of a National Waste Management Agency.

- Decree n° 93-2120 dated 25 October 1993, laying down conditions and intervention methods of Fund on Pollution Abatement (FODEP) which amended and complemented by decree n° 2005-2636 dated 24 September 2005. - Ordinance by Minister of Environment and Land Use Planning dated 28 February 2001 related to the approval of ‘terms and conditions’ document laying down conditions and methods of exercising activities of collection, transport, storage and valorization of non hazardous wastes.
- Ordinance by the Minister of Environment and Sustainable Development dated 23 Mars 2006 related to the establishment of center for treating hazardous wastes in Jradou and three transfer centers in Bizerta, Sfax and Gabes.
- Promulgation of law n°97-37 dated June 02, 1997 related to road transport of hazardous products which has been completed by decree in this regard.
- Decree n°2006-2687 dated 9 October 2006, related to the procedures of opening and operation of dangerous or insalubrious or incommodious factories.
- Ordinance by Minister Industry, Energy and small-medium Enterprises dated 15 November 2005, laying down nomenclatures of dangerous or incommodious factories.
- Ordinance by Minister of Environment and Sustainable Development dated 17 January 2007 related to the approval of ‘terms and conditions’ document laying down conditions and methods of exercising activities of collection, transport, storage and valorization of non hazardous wastes.
- Starting a study on revising and updating Tunisian standards in the environment field.

### ***Incentives***

- Companies that carry out hazardous activities are obliged to pay taxes on a yearly basis;
- Companies that take measures to abate pollution may profit from special investment and tax tariffs;
- Exoneration of import tariffs and VAT for equipment that has to be imported and cannot be locally produced, and for VAT for locally produced equipment;
- Deduction of taxes of a maximum of 50% of profits reinvested or investment realized for equipment mentioned by decree n°94-1191; and
- The Fund on Pollution Abatement (FODEP). This fund has been installed by law n°92-122 and complemented by decree n° 93-2120 dated 25 October 1993, laying down conditions and intervention methods of Fund on Pollution Abatement (FODEP) which also amended and complemented by decree n° 2005-2636 dated 24 September 2005. It aims at helping the industries to invest in pollution abatement techniques. Projects are financed through this fund with the following financial scheme: 30% of the total project costs are to be financed with companies own means, up to 20% subsidy and for the remainder 50%, soft bank loans may be obtained. Projects are judged by the Ministry for the Environment through a fixed procedure.

As of 2007, the FODEP has contributed in extending funds to 450 pollution mitigation projects, waste collection, treatment and recycling projects and clean technologies projects, which received total grants amounting to about 27.4 million TND and total investment costs estimated as 137 million TND.

### ***Industry***

- The only-one industry of pulp and paper has replaced the Denora-Permelec process of electrolysis for the production of chlorine used to whiten pulp by a membrane process, which presents less risk for the environment. Thus, the release of significant quantities of mercury in wastewater has been avoided;
- The new process of SOTULUB (the Tunisian Company of Lubricating Oils) specialized in the re-refining and regeneration of waste mineral oil has permitted the

avoidance of the generation of a significant quantity of hazardous wastes especially acid tars and used acid-treated clay;

- The Tunisian industry of electric transforms has avoided the use of mineral oils containing PCB;
- Two industries of asbestos-cement pipes, over three in Tunisia, have abandoned this process to the profit of plastic pipe process;
- The Tunisia's only refinery has set up: (i) pre-treatment facilities to remove chemical pollutants (sulphur base chemicals, acids, etc.) and oil from wastewater (ii) treatment unit of sludge (high lead content);
- The two industries of car batteries are recycling the lead fraction of the dead batteries;
- Around 50 industrial enterprises (electronics, mechanics, chemicals, oil extraction, etc.) have obtained ISO 14001 Certification.

### *Others*

- Hundreds of companies in Tunisia are working in the field of the management of wastes: household wastes, wastewater, plastic wastes, metal wastes, health care wastes, dead batteries and accumulators, used printer cartridges, radiological films, paper, sludge of wastewater treatment facilities. 105 companies received subventions from the National Fund on Pollution Abatement (FODEP);
- The Tunisian Company of Lubricating Oils owns and operates a 16000 metric tonnes/year capacity plant for the re-refining and regeneration of used mineral oils;
- A public system (ECO-LEF) for the collection (remunerated collection) of used packaging and its treatment, recycling and reuse was created. It is financed by contributions from members (producers, packagers, distributors and importers). Major indicators of the ECO-LEF system (for the year 2005):
- Number of "ECO-LEF" used packaging collection points: 200 points;
- Volumes collected: 11000 tonnes of used packaging.
- A public system (Eco-Zit) for the collection and the regeneration of the lubricating used oils was created. It is financed by contributions from oil companies. In 2005, 14000 tons of lubricating used oils have been collected and regenerated.
- A public system (Eco- Filtre) for the collection, the treatment and the recovery of the used oil filters was created. The system is financed from contributions from involved private companies.
- Experimental operation of a pilot unit for the treatment of used oil filters (500 tons/year). Industries involved in this project are the Tunisian Company of Lubricating Oils which takes care of recovery and regeneration of the oil fraction; a cement plant which collects the synthetic fraction and assures recovery of its energy content; and a foundry which handles the metal fraction; and
- 21 old industrial zones have been rehabilitated and renovated.

In response to the aspirations of industrialists, the Tunis International Centre for Environmental Technologies (CITET) has granted priority order to capacity building in matter of environmental management, either based on ISO 14001, or on adopting efficient environmental management.

Creation of the National Waste Management Agency (established by decree n°2005-2137 dated August 22, 2005) which is entrusted with the design and implementation of the measures provided in the national waste management programmes, contributing in technical and financial assistance to municipalities, technical coaching of industrialists, oversight of the public systems related to waste management, operation and maintenance of the facilities dedicated to dangerous wastes, as well as drafting of "Terms and conditions" documents and authorization requirements in relation to waste management.

## **Uganda**

**Year** 2007

**Policies** The National Environment Policy, 1994 and Environment Sector Plan/Programme. This plan/programme is reviewed after every 5 years.

**Legislation**

- The National Environment Statute, 1995
- The National Environment (Waste Management) Regulations, 1999
- The National Environment (Standards for Discharge of Effluent in Water or land) Regulations, 1999
- The Guidelines on the Management of Toxic and hazardous waste
- The 1 Environmental Audit Guidelines, 1999
- The Environmental Audit Regulations, 2006
- The Environmental Impact Guidelines, 1997
- The Environmental Impact Regulations, 1998

**Incentives**

- Uganda has incentives, import duty, sales tax exemptions for environmentally friendly and appropriate technologies.
- Uganda has increased taxes of second hand goods imported into the Country.
- The Counterfeit Bill approved by cabinet awaiting to be tabled in Parliament

**Industry**

- Voluntary adoption of Environment Management System (ISO 14000)
- Adoption of Cleaner Production Technologies
- Establishment of National Cleaner Production Centre hosted by URI under assistance from UNIDO

**Others**

- Undertaking of annual environmental audits
- NEMA's involvement in environmental compliance assistance to facilities
- Building Capacity through awareness training programmes and increased information disseminations and Harmonization of other sectoral policies and laws.

## **Zambia**

**Year** 2007

**Policies** The National Waste Management Strategy is complete.

The Environmental Council of Zambia in conjunction with other stakeholders has drafted Technical guidelines on the Sound Management of Health Care Waste and Minimum Specifications for Health Care Waste Incineration.

The Environmental Council of Zambia conducts public awareness on proper management of hazardous wastes. The Environmental Council of Zambia has also conducted projects that aim at disposal of hazardous and other wastes and reduction of generation of hazardous and other wastes.

Conditional licensing system for generation of hazardous waste has been introduced; the higher the amount waste generated, the higher the license fees. Basically the Polluter Pays Principle is employed.

**Legislation**

The Zambian Government has an Environmental Protection and Pollution Control Act which was enacted in 1990;

Hazardous Waste Management Regulations, 2001 have been developed to address all aspects of hazardous waste management;

The pesticides and Toxic Substances Regulation came into effect in 1994. It addresses all aspects of chemicals management;

Guidelines on management of used oil, lead acid batteries and health care waste being developed; and

The Ozone Depleting Substances regulations of 27 of 2001 restricts importation of ODS and equipment containing ODS and management of Obsolete equipment.

**Incentives** Still to be developed.

**Industry** Implementation of cleaner production techniques; and setting up of environmental departments.

**Others** Public awareness programmes.

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**UN Region: Asia and Pacific**

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**Azerbaijan**

**Year** 2007

**Policies** National Hazardous Wastes Management Strategy was adopted by the decree of Cabinet of Ministers of the Republic of Azerbaijan on 25th August 2004.

**Legislation** It provides and includes international principles, a policy and decision-making framework for the environmentally sound management of hazardous wastes and a system for the collection, treatment, recycling and disposal of hazardous wastes according to international practice and standards.

**Incentives**

**Industry** Facilities and devices are constructed by organizations, which are dealing with neutralization and utilization of hazardous wastes.

**Others**

**Bahrain**

**Year** 2007

**Policies** A new incineration system for treating the generated healthcare wastes ( i.e. clinical, pharmaceutical, infectious anatomical and chemical wastes) has been commissioned and is operating since April 2002 ,which is considered as a major milestone in environmental protection and part of national strategy to reduce and treat the hazardous wastes in the country; and

Environmental Affairs (EA) is approaching international agencies and organizations to assist in minimizing the quantity of industrial / hazardous of wastes generated in the country. Many meetings have been held with the major industries to chalk out practical and achievable plans and programs for waste minimization utilizing efficient and environmental friendly processes, methodologies and equipment.

**Legislation** Healthcare Waste Management Standards: Ministerial Order No.1 of 2001 has been issued highlighting the collection, transportation, storage, transfer, treatment and disposal of hazardous healthcare waste generated in Kingdom of Bahrain. The emissions from healthcare treatment facilities are also streamlined as well as the management and disposal of effluent and solid waste residues;

Article 5 states : The waste producer shall seek to reduce the generation levels of such waste in quantity and quality through developing the appliances and equipment used, adopt and use a clean technology, select the alternatives and raw materials that cause less damage to the environment and public health;

Used Oil Management Standards: Ministerial Order No.4 of 2005 has been issued highlighting the collection, storage, handling, treatment, disposal, recycling and reuse of oil and related products.

Hazardous Waste Management Standard: Ministerial Order No.3 of 2006 has been issued highlighting the collection, storage, handling, transportation, transfer, treatment, disposal, recycling and reuse.

***Incentives***

None.

***Industry***

Several industrial companies (ALBA and GPIC) adopted ISO 14000 standards and were certified by ISO, in addition to the implementation of environment management systems.

***Others***

Ongoing projects on cleaner production, recycling, reduction of hazardous waste and elimination of hazardous waste.

**Cambodia**

***Year***

2007

***Policies***

Application of the environmental assessment system and environmental license to new and ongoing industrial activities with regard to the hazardous waste management.

***Legislation***

Solid Waste Management Sub-Decree, 1999;  
Water Quality Management Sub-Decree, 1999; and  
Air Pollution Control and Noise Disturber Management Sub-Decree, 2001.

***Incentives***

Polluter pays principle have been applied for some individuals and industrial sectors. Licensed charges for some industries.

***Industry***

Industries and waste generator have been complied with Cambodian Regulation and Provision of Basel Convention.

Some industries have been awarded with the ISO 14000 series certification.

***Others***

None.

**China**

***Year***

2007

***Policies***

China

The State encourages and supports cleaner production and minimization of the generation of solid wastes.

In recent years, MEP has made great efforts to promote cleaner production, including policy and regulation making, technical training, advanced experience spreading and etc.

Law of the People's Republic of China on Prevention of Environmental Pollution Caused by Solid Waste, effective on April 1st, 2005, stipulates:

The principle of prevention of environmental pollution caused by solid waste in China includes reduction of the generation and harm of solid waste, recycling and disposal of solid waste in environmentally sound manner. The state takes measures to promote cleaner production and circular economy.

The state manages to promote research on techniques and facility reducing generation and harm of industrial solid waste, publicizing the catalog of unadvanced techniques and facilities need to be eliminated.

Industrial corporation should choose and use materials, energy and other resources properly, reduce generation and harm of industrial solid waste.

Hong Kong Special Administrative Region, China

A Waste Reduction Framework Plan was launched in November 1998 to minimize the amount of waste produced that requires disposal and to promote recycling of different types of wastes. One initiative being undertaken is to study waste management tools and technologies that can reduce the amount of waste requiring final disposal. The Government has reserved land to set up a Recovery Park and encourage development of waste minimization and recycling technologies.

A Policy Framework for the Management of Municipal Solid Waste for 2005-2014 has been published in 2005 to advocate waste avoidance and minimization in Hong Kong and outline the HKSAR Government's three-tier approach to achieve a sustainable waste-management strategy: waste avoidance and minimization; reuse, recovery and recycling; and bulk reduction and disposal of unavoidable waste. Waste charging, producer-responsibility schemes and landfill-disposal bans underpin the framework, with sustained public education and partnership, and legislative backing for support. It also proposes to develop state-of-the-art Integrated Waste Management Facilities with incineration as the core technology for final waste treatment.

A territory-wide waste recovery programme was introduced in January 2005 to facilitate separation of different types of wastes at sources. A 20-hectare EcoPark is being developed by the HKSAR Government to provide long term land for the recycling industry, which would facilitate local recycling of recovered wastes. In parallel, the feasibility of introducing a producer responsibility scheme on handling of obsolete electrical and electronic equipment is being studied.

HKSAR Government provides funding support to the development of recycling technologies through the Environment and Conservation Fund and the Innovation and Technology Fund. In addition, Hong Kong Productivity Council (HKPC), a statutory organization of the HKSAR, has since 1979 been developing and promoting cleaner production practices and technologies to assist local industries and business sectors in minimization/elimination of their generation of hazardous wastes and other wastes. Relevant examples include provision of the technical support to electrical and electronic equipment manufacturers to comply with the European Union's Directives on the Waste Electrical and Electronic Equipment and the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, and development of various technologies/techniques to help various industries to reduce the discharge of hazardous wastes.

Under the Policy Framework for the Management of Municipal Solid Waste (MSW), a multi-technology Integrated Waste Management Facilities (IWMF) will be commissioned in mid 2010s. The three existing landfills will be extended to provide the final repository for the waste which cannot be recycled or treated, or for the residues after treatment at the IWMF.

### ***Legislation*** China

In August 1996, the State Council enacted "Decisions of State Council on Several Issues of Environmental Protection" which demands to ban, close and stop 15 kinds of enterprises which cause serious pollution to the environment.

In January 1999, the State Commission of Economy and Trade issued "List of the backward technology and products for elimination".

In June 2002, the 28th session of the Ninth National People's Congress Standing Committee of the People's Republic of China enacted the Law of Cleaner Production Promotion.

On April 1st, 2005, China enacted the law on the Prevention and Control of Environmental Pollution by Solid Waste of the People's Republic of China.

***Incentives***

***Industry***

***Others***

**Cyprus**

***Year***

2007

***Policies***

A National Strategy for the Management of Wastes has been prepared, taking into consideration all the necessary measures for the reduction of the generation of wastes, as provided in the relevant E.U legislation.

The National Strategy for the Management sets the basic principle of the waste hierarchy "Generation of waste shall be avoided whenever possible, wastes shall be recovered/ recycled whenever possible and wastes shall be disposed of in an environmentally compatible way".

***Legislation***

In accordance with the E.U and national legislation the environmental standards and the criteria to reduce and eliminate generation of hazardous wastes and other wastes are in elaboration.

***Incentives***

Actions have been made to the Ministry of Finance using economic instruments to encourage environmentally friendly activities or discourage polluting activities.

***Industry***

Economic and consumer pressures have moved industry to introduce methods of waste reduction on a voluntary basis. Some of the initiatives that are in place include: total Quality Management programs such as ISO standards. These programs improve the overall operations of businesses and as a partial result of these efforts; a net reduction in wastes is achieved.

***Others***

**Indonesia**

***Year***

2007

***Policies***

- 1.Encourage generators to implement hazardous waste minimization and avoidance strategies in their activities;
- 2.Promote waste exchanges;
- 3.Encourage establishment recycling facilities for hazardous wastes; and
- 4.Implement environmental compliance program for industries.

***Legislation***

Article 9 (1), Article 27 (1), and Article 33 (1) of Government Regulation No. 18/1999 Jo 85/1999.

***Incentives***

Existence of commercial treatment facilities for hazardous wastes give generators opportunity to calculate the costs to manage their hazardous waste properly. High costs faced by generators, in turn, could be the reason for industries to reduce generation of hazardous waste. On the other hand, they have to pay more for treatment of more waste their produce.

Articles 9, 27, 33 and 18-22 of the GR No. 18/1999 encourage activities to utilization/minimization and 3R of waste. As the specification of the waste is conform with the need of other industries for raw material, generators would gain benefits from it.

To discourage improper management of waste, Chapter IX of the Law of Republic of Indonesia No 23/1997 states that any recklessness and or intentional

mismanagement of (hazardous) wastes that violate applicable environmental and other rules might be liable for imprisonment and fine. Range of fine is at minimum IDR100,000,000 Rupiah to IDR450,000,000, depend on the crimes committed, and so the the length of imprisonment.

### **Industry**

An Environmental compliance program, called PROPER, has launched by the Ministry of Environment in cooperation with local governments to encourage industries to comply with Indonesian environmental regulations. Inspectors conduct compliance audits to industries, ranked them into five categories (black, red, blue, green, and gold) and the results then announced publicly every year. Black and Red represent insufficient compliance, Blue indicates fully compliance, while Green and Gold represent beyond compliance. Announcement creates incentives and disincentives reputation for industry. Industries ranked Black and Red usually are under pressure since they might face problem with their financial resources such as banks. In this case, they will increase their efforts to comply with applicable regulations such as water and air pollution control and hazardous waste management.

### **Others**

#### **Iran (Islamic Republic of)**

**Year** 2007

**Policies**

- Waste Management Strategy which was developed in 2000 and approved by the supreme Environment Council.
- Elimination or decrease in the generation of hazardous wastes.
- Setting up the Committee of Recycling.
- Setting up the National Committee of Hazardous wastes and Chemicals.
- Setting up the National Working Group on PCBs waste.
- Developing research and pilot projects on recovery and final disposal of hazardous wastes in cooperation with industry and universities.

**Legislation**

- Ratification of national waste management legislation and its national implementation bylaw
- Implementing of article 11 of the national waste management law.
- Regulations and standards have been established to prevent, control and monitor environmental damage and pollution by industrial sector and health-care wastes or any other kind of hazardous waste generators.
- Guidance for clinical waste management has been prepared by Department of Environment.
- Guidelines for separation, collection and proper disposal of industrial hazardous waste is being prepared by Department of Environment.
- Defining projects based on article 11 of the national waste management law in order to prepare regulations and guidelines on management of hazardous waste.

**Incentives**

- Environmental penalty for the industries and other pollutant centers that violate the national hazardous waste laws on collection, transportation and disposal. Hazardous waste penalty is paid for a cleaner environment and environmental training (article 16 of Waste management bylaws)
- financial support for companies that introduce an initiative regarding ESM by public banks and ministry of Industries & Mined

**Industry**

- Industrial sectors and other waste generators try to minimize their wastes.
- collection and disposal of waste in industries based on basis of waste management bylaws.
- Industries are promoting to apply ISO systems.
- Industrial sectors try to utilize clean production technologies and provide an

atmosphere for green industries.

- Environmental impact assessment is required prior to any industrial development projects. (Environmental impact assessment is carried out in accordance with the provisions stipulated in the Law "On Environmental impact assessment", passed on October 14, 1998)

### *Others*

#### **Japan**

##### *Year*

2007

##### *Policies*

Government of Japan established the Basic Environment Plan in 1994, and it was amended in 2000. At the same time, the Basic Law for Establishing a Sound Material-Cycle Society was enacted. The Basic Law aims to promote sound cyclical use and disposal of waste and the like, and prioritize the following actions in order of number: (1) restricting generation, (2) reuse, (3) recycling, (4) heat recovery, and (5) the correct disposal of waste and the like.

A new socioeconomic system needs to be created where responsibilities and costs on waste treatment and recycling are shared among industries, consumers, local governments and the national government as necessary. In such system, there should be incentives to reduce waste generation and recycle at each stage of product development, manufacturing, import, distribution, consumption, collection and recovery.

##### *Legislation*

"Waste Management and Public Cleansing Law", "Law for Promotion of Effective Utilization of Resources", "Container and Packaging Recycling Law", "Electric Household Appliance Recycling Law" etc.

##### *Incentives*

Policy financing for establishment of treatment facilities; and preferential tax treatment.

##### *Industry*

Under the Voluntary Action Plan on the Environment adopted by the Keidanren (Japan Federation of Economic Organization), measures are taken on promoting recycling and limiting the discharge of wastes.

### *Others*

#### **Kazakhstan**

##### *Year*

2007

##### *Policies*

To provide ecological safety of the Republic of Kazakhstan and definition of a package of the state measures on sustainable ecological development of the country in December, 2003 the Concept of ecological safety of the Republic of Kazakhstan for 2004-2015 years is approved by the Decree of the President of the Republic of Kazakhstan.

One of primary goals of ecological safety are liquidation and prevention of historical pollution, radioactive, bacteriological and chemical pollution, including transboundary, and also reduction of volumes of accumulation of industrial and household wastes.

The special attention of the Concept is directed on solving questions of transboundary character, including transboundary movements of hazardous wastes that have allowed strengthening customs rules on declaring hazardous wastes and prevention of their receipt on territory of the republic in the guise of secondary raw material and production.

With a view of realization of Strategy of development of the Republic of Kazakhstan till 2030 (the Decree of the President of the Republic of Kazakhstan from August, 15, 2003 N 1165), the Concept of transition of the Republic of Kazakhstan to sustainable development on 2007 - 2024 is adopted by the Decree of the President of Republic of Kazakhstan from November, 14, 2006 N 216. One of tasks in the field of environment protection is increase of a level of use of wastes: "To strengthen state control of disposal and recycling of wastes, and also decrease in their harmful influence on environment it is stipulated:

To develop uniform state approaches to the solving problem of production and consumption wastes;

To develop a wastes management system of at various levels;

To introduce system of gathering, storage and controllable recycling of domestic wastes on all territory of the republic;

To develop measures on development of system of monitoring of storehouses of wastes."

Currently Program on liquidation radioactive dumps of uranium extractive industry and the Program on liquidation ownerless petroleum and self shed hydro-geological chinks are being realized.

### **Legislation**

By the Law of the Republic of Kazakhstan on June 26, 1998 #233-1 "On national safety of the Republic of Kazakhstan" (with changes and additions on conditions on 07.08.2007) for the purpose of providing of environmental safety, prevention radioactive, chemical pollution, bacteriological contamination of the territory of the country the unsupervised import of environmentally hazardous technologies, matters and materials to Kazakhstan is prohibited.

The main legislative acts of the Republic of Kazakhstan regulating relations in sphere of industrial and domestic wastes are laws "On environment protection" and "On bowels and bowels use" and "On atomic energy use" concerning radioactive waste (with changes and additions on conditions as of 07.05.2007)

Law of the Republic of Kazakhstan on June 24, 1999 "On ratification of the Convention on the prohibition of the development, production, stockpiling and use of chemical weapon and on their Destruction", (Paris on January 13, 1993) is adopted.

The Law of the Republic of Kazakhstan on March, 20, 2007 № 238-III «About ratification of the Convention on transit trade of the midland states".

By the resolution of the Government of the Republic of Kazakhstan on April 15, 1996 #439 the Regulations "On prohibition of use in the Republic of Kazakhstan of environmentally harmful pesticides and on order of their burial" were adopted. Regulations prohibit use of highly toxic pesticides possessing evident accumulative, carcinogenic, mutagenic, teratogenic, emrio and gonado toxic properties and possessing ability of accumulation in plants, soil and water in the Republic of Kazakhstan.

The Law of the Republic of Kazakhstan on May, 7, 2007 № 245-III " About ratification of the Convention on prohibition of development, manufacture and accumulation of stocks of bacteriological (biological) and toxic weapon and about their destruction "

The Law of the Republic of Kazakhstan on April, 23, 2008 № 28-IV " About ratification of the United Nations Convention about sea transportation of cargoes" (1978)

The Agreement on control on the transboundary movement of hazardous wastes and other wastes signed by states-participants of Commonwealth of Independent States (CIS) on April 12, 1996 in Moscow was adopted by the resolution of the Republic of

Kazakhstan on April 28, 1997 #670. Lists of main groups of hazardous wastes and their properties are attached to this Agreement based on the regulations of Basel convention.

By the resolution of the Government of the Republic of Kazakhstan on June 9, 2000 #878 the National Action Plan on hygiene of environment of the Republic of Kazakhstan (with changes adopted by the resolution of the Government of RK on 12.09.03 #922) that provides for sanitary- epidemiological safety of soils and cleansing of territory from domestic and industrial wastes was adopted.

By "Sanitary epidemiological requirements to collection, use, sterilization, transportation, storage and burial of wastes of medical organizations" (adopted by the order of Deputy Minister of Health of the Republic of Kazakhstan on January 13, 2004 #19) different requirements to collection, temporary storage and transportation are made to waste according to their class of danger. Mixture of wastes of different classes on all stages of their collection, storage and transportation is prohibited.

The order acting Minister of Health care of the Republic of Kazakhstan on June, 23, 2008 № 362 "About adoption of sanitary-and-epidemiologic rules and norms " Sanitary-and-epidemiologic requirements to gathering, neutralization, storage, movement and a burial of medical wastes."

The order of acting Minister of Health care of the Republic of Kazakhstan on May, 13, 2005 № 227 "About adoption of sanitary-and-epidemiologic rules and norms" Sanitary-and-epidemiologic requirements to the maintenance and operation of the organizations of nonferrous metallurgy".

The order of acting Minister of Health care of the Republic of Kazakhstan on July, 8, 2005 №335 "About adoption of sanitary-and-epidemiologic rules and norms" Sanitary-and-epidemiologic requirements to ensuring of radiation safety of scrap metal ".

The order of acting Minister of Health care of the Republic of Kazakhstan on March, 9, 2005 № 101 " About adoption of sanitary-and-epidemiologic rules and norms " Sanitary-and-epidemiologic requirements to ensuring radiating safety of objects of an oil-and-gas industry".

### ***Incentives***

Economic tools for regulation of issues of consumption and production wastes management, including transboundary movement of hazardous wastes are under development.

In accordance with Ecological code the Government of the Republic of Kazakhstan can adopt limited rates of a payment for emissions in environment with a view of provision of economic incentives of effective realization actions for a waste management by nature users.

### ***Industry***

According to requirements of the Ecological code of the Republic of Kazakhstan owners of wastes (legal and physical persons as a result of which economic activities these wastes are generated) should provide gradual reduction of volumes of their formation at all stages of a production cycle, including by improvement of production processes, repeated or alternative use (recycling) wastes, transfer of wastes to the enterprises interested in their use.

At a choice of a way and a place of neutralization, disposal or placing of wastes, and also at designation of the enterprise for processing, disposal or placing of wastes, owners of wastes should provide the minimal movement of waste products from a source of their generation.

Physical and legal persons during those economic activities wastes are generated are obliged to provide system of their safe management to observe ecological and sanitary-and-epidemiologic requirements and to carry out actions for their recycling, neutralization and safe disposal.

Warehousing, destruction and burial of wastes are made in the places determined by decisions of local agencies agreed with authorized bodies in the field of environment protection, sanitary-and-epidemiologic service and other authorized bodies of the Republic of Kazakhstan, carrying out functions of environment protection.

The Government of the Republic of Kazakhstan or the authorized body in the field of waste management can demand from suppliers of the certain kinds of production of creation of necessary conditions for return of used products or materials for the subsequent recycling or disposal.

Activity of physical and legal persons during which hazardous wastes are generated can be:

- limited at absence of provision with wastes management safe for human health and environment;

- forbidden in case of numerous (more than two times) infringements of ecological requirements, sanitary-and-epidemiologic rules and norms at wastes management, entailed causing of harm to health of people and environment.

Requirements to hazardous wastes management are legally determined.

Hazardous wastes depending on a degree of their harmful influence on environment and human health are subdivided into categories according to the criteria established by authorized body in the field of environment protection.

Physical and legal persons during activity of which hazardous wastes are generated, should carry out the actions directed on the termination or reduction of their generation and - or decrease in their toxicity.

Activity of physical and legal persons during which hazardous wastes are generated, can be limited or forbidden at absence of an opportunity to provide hazardous wastes management safe for environment and human health.

The workers having leave to hazardous wastes management should pass the special professional training confirmed with certificates for right to work with hazardous wastes. Appropriate official of the organization is liable for the leave of workers to work with hazardous wastes.

The legal person which economic activity includes hazardous wastes management is obliged to compensate the harm caused to the worker by a labor mutilation at realization by him hazardous waste management, according to the legislation of the Republic of Kazakhstan on labor.

The owner of hazardous wastes should provide marks of containers with hazardous wastes with the instruction of dangerous properties. By transfer of such wastes to other persons on the certain term owner are obliged to inform them in writing on dangerous properties of these wastes and about safety measures at its management. For hazardous wastes the passport should be made. The passport of hazardous wastes is made on the basis of the data on structure and dangerous properties of wastes. The order of certification is determined by the authorized body in the field of environment protection.

It is forbidden to mix hazardous and no hazardous wastes during manufacture, accumulation, movement, placing. Placing of hazardous wastes is authorized in the specially equipped places and is carried out according to license conditions concerning hazardous waste management. Realization of other kinds of the activity which has been not connected to hazardous waste management on the territory allocated for their accommodation is forbidden.

The responsibility of the subject of economic activities, in the property or in using of which there even one object of hazardous waste management subject to the state licensing demands obligatory insurance.

Requirements to movement of hazardous wastes are especially agreed. Generation of hazardous wastes and their movement should be reduced to a minimum.

Movement of hazardous wastes is permitted under following conditions:

- Presence of the appropriate packing, marks and tags of hazardous wastes for the purposes of movement;
- Presence of the vehicles specially equipped and supplied with special marks;
- Presence of the passport of hazardous wastes and documentation for movement and transfers of hazardous wastes with the instruction of quantity of moved hazardous wastes, the purpose and destination of their movement.

Observance of safety requirements to movement of hazardous wastes on vehicles, and also to cargo handling works.

The order of packing and marks of hazardous wastes is developed for the purposes of movement by competent body in sphere of the waste management and coordinated with the central agency in the field of environment protection.

The order of movement of wastes on vehicles, requirements to performance of cargo handling works and other necessary requirements on ensuring ecological and sanitary-and-epidemiologic safety are determined by state standards (norms and rules), developed and confirmed by state bodies on supervision of safety on appropriate type of transport and coordinated with central agencies in the field of environment protection and sanitary-and-epidemiologic well-being of the population. From the moment of loading wastes on a vehicle and acceptance by their organization or the physical person, carrying out movement of wastes, and till their unloading in agreed place from a vehicle the legal responsibility for safe handling of them is accounted by the transport organization, or the person to whom the given vehicle belongs.

#### ***Others***

#### **Malaysia**

***Year*** 2007

#### ***Policies***

Malaysian Agenda for Waste Reduction (MAWAR); and promotion of cleaner production.

#### ***Legislation***

In preparation to enhance existing provision in the Environmental Quality (Scheduled Wastes) Regulations 2005 to reduce wastes using best practicable means.

#### ***Incentives***

Special capital allowance incentive to companies which generate wastes and intend to set up facilities to treat their own wastes covering all capital expenditure incurred.

#### ***Industry***

Cleaner production, waste minimization and ISO 14001 certification.

#### ***Others***

#### **Pakistan**

***Year*** 2007

#### ***Policies***

Formulation and implementation of National Conservation Strategy and National Environmental Action Plan, National Cleaner Production Centres in various sectors.

#### ***Legislation***

Pakistan Environmental Protection Act, 1997; Self Monitoring and Reporting Rules-1998; Industrial Pollution charge (Calculations and Collection Rules)-1998; Draft Hazardous Substances Rules-2007; Revised National Environmental Quality Standards-2000; Import Policy Order – 2006 issued by Ministry of Commerce; and Draft Hospital Waste Management Rules-2005.

#### ***Incentives***

The Government has reduced import duty on pollution abatement equipment from 30% to 10%.

#### ***Industry***

•Federation of Pakistan Chambers and Commerce has included environment

services as one of its principal function and also established its Standing Committee on Environment;

- A number of Industrial Sectors/units have established environment cells;
- Pakistan Tanners Association contributed about 28% of the total cost of construction of Korangi Combined Effluent Treatment Plant in Karachi;
- Local Tanneries Associations in Kasur have contributed about 54% of the total cost of construction of Kasur Tanneries Pollution Control Project;
- Other industry-supported initiatives include Environmental Technology Program for Industry, National cleaner Production Center for fuels and Clean Production Program; and
- A number of hospitals have installed incinerators for disposal of infectious waste.

#### *Others*

#### **Philippines**

*Year* 2007

- Policies*
- Implementation of programs/ projects assisting industrial facilities in coming up with an Environment Management System;
  - Philippines developed a Business Agenda 21, promoting the use of cleaner production or cleaner technologies using waste minimization concepts; and
  - promotion of the Philippine Environmental Partnership program (PEPP).

#### *Legislation*

- Presidential Decree 984: Pollution Control law of 1976;
- Presidential Decree 1586: Environmental Impact Statement (EIS) System;
- Republic Act 6969; Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990;
- Republic Act 8749: Clean Air Act of 1999;
- Republic Act 9003: Solid Waste Management Act of 2000; and
- Republic Act 9275: Philippine Clean Water Act of 2004.

#### *Incentives*

#### *Industry*

Compliance to Republic Act 6969 specifically on the registration and reporting requirements for hazardous waste generators.

#### *Others*

#### **Qatar**

*Year* 2007

#### *Policies*

Industries have been suggested to recycle and re-use wastes wherever possible. Any new industry on operation is required to take a consent to establish as part of EIA procedure.

#### *Legislation*

The generator would make continuous effort towards minimization of hazardous waste and other wastes and make annual assessment of the efforts for submission to the Supreme Council For The Environment in Qatar.

#### *Incentives*

#### *Industry*

Spent catalysts are sold or given to recycling companies; and Waste oils are collected and taken offsite by contractor for recycling.

#### *Others*

#### **Singapore**

**Year** 2007

**Policies** The strategies taken to manage hazardous wastes include:  
Avoid/reduce generation of hazardous wastes;  
Use less hazardous chemicals;and  
Use clean technology and recycle/re-use toxic industrial wastes where appropriate.

National Recycling Programme (NRP) for households was launched in April 2001 to increase recycling rate for household wastes. The programme has achieved a participation rate of 63%, up from 59% in 2006.

On 5 June 07, the government, industries and NGOs signed the Singapore Packaging Agreement to work towards reducing waste at source in Singapore. The Agreement is voluntary, to provide greater flexibility for the industry to adopt cost effective solutions to reduce packaging waste.

An interagency task force led by the Economic Development Board was formed in May 2001 to draw up the framework and action plans to develop Singapore into a Centre of Excellence for waste recycling in the region in 10 years' time. The task force recommended a framework comprising the following four strategic thrusts:  
To create a pro-environment culture both in the corporate world and in the community;  
To develop an effective supporting infrastructure to help nurture the waste recycling industry;  
To build a strong foundation for technology development and innovative application of technologies; and  
To create a vibrant waste management industry.

(<http://www.nea.gov.sg/cms/pcd/EPDAnnualReport2006.pdf>)  
[http://app2.nea.gov.sg/NEADownload.aspx?res\\_sid=20081201558927818640](http://app2.nea.gov.sg/NEADownload.aspx?res_sid=20081201558927818640)

**Legislation** Prior to Singapore's notification to the Basel Convention, the Pollution Control Department applied the Environmental Public Health (Toxic Industrial Waste) Regulations to regulate the export, import and transit of hazardous wastes.

In November 1997, Singapore enacted the Hazardous Waste (Control of Export, Import and Transit) Act (HWA) and its regulations that came into operation on 16 March 1998. The Act and its regulations enable Singapore to fulfill the obligations of the Basel Convention. Under the Act and its regulations, a permit is required for the export, import and transit of hazardous wastes scheduled under the Basel Convention.

**Incentives** Private companies can apply to Agency for Science, Technology and Research (A\*STAR) for research funding on reduction of hazardous waste generation or recycling of hazardous wastes.

The National Environment Agency (NEA) has continued to provide a \$20 million Innovation for Environmental Sustainability (IES) Fund. Through this fund, NEA will provide seed funding for innovative projects undertaken by the industry and in the community that will help Singapore attain its goals of environmental sustainability. Companies could seek assistance in the development and test bedding of promising and innovative technologies on waste recycling.

([http://app.nea.gov.sg/cms/htdocs/category\\_sub.asp?cid=42](http://app.nea.gov.sg/cms/htdocs/category_sub.asp?cid=42))

**Industry** Cleaner production; and waste minimization/reduction/recycling/recovery programs.

The Waste Management and Recycling Association of Singapore (WMRAS) was established on 8 August 2001. Members of the association include companies in the waste management and recycling industry. WMRAS serves as a platform for the waste recycling companies to pool their resources, to collaborate and to work together to upgrade and raise the professionalism of the waste management and recycling industry.

(<http://www.nea.gov.sg/cms/pcd/EPDAnnualReport2006.pdf>)

**Others**

**Sri Lanka**

**Year** 2007

**Policies**

- Ministry of Environment and Natural Resources developed a National Cleaner Production Policy and strategy with a view to promote pollution prevention activities and life cycle management. The following policies advocate reduction of HW throughout the life cycle of the products and provision of services.

- National Environment Policy
- National Cleaner Production Policy
- Cleaner Production Sectoral Policy for the Health Sector
- Cleaner Production Sectoral Policy for the Tourism Sector.

- National Cleaner Production Centre assists industries to carry out environmental audits and reduce waste generation.

- A decision was taken to introduce Load Based Licensing scheme under the Environmental Protection License (EPL) program. This scheme would provide incentives to industrialists to reduce the load of pollution. Legislation for the implementation of the load Based Licensing Scheme had been drafted.

- A national Electrical and Electronic Waste Management Policy is being drafted with special emphasis on reduction of the generation of e-waste and e-waste management throughout the life cycle.

- A national Solid waste Management Policy was formulated covering non hazardous waste. A national program is being implemented for the implementation of this policy aiming at reduction of waste as much as possible before final disposal. A national platform was established to monitor the progress.

- The above activities to address non hazardous non HW will facilitate separation of hazardous waste from non hazardous waste. Thereby indirectly facilitate management of hazardous waste.

- Polluter Pays Principle was recognized in the National Environmental Policy and the National Solid Waste Management Policy to ensure efficient waste management systems in the country.

- Companies seeking financial assistance on preferential terms from commercial banks are required to meet environmental conditions and to obtain Environmental Protection Licence.

- Preliminary inventories for Pesticides, Dioxins and Furans and PCBs have been prepared. These inventories cover HW streams such as PCB and Action Plans have been developed to prevent importation of POPs waste.

### **Legislation**

- Regulations for Internal Management of Hazardous waste regulations are in place. These regulations have been revised to incorporate a prescribed list of hazardous waste identified under Non specific sources and Specific sources (List A & List B Wastes).

- Guidelines for the implementation of hazardous waste management regulations are in place.

- A guidance manual for safe and effective detection and investigation of illegal traffic and transboundary movement of hazardous wastes and other wastes has been prepared and under revision to improve the text further.

- Environmental Protection License scheme and the Environmental Impact Assessment scheme under the National Environmental Act are in place.

- Guidelines for siting of industries have been formulated.

Legislation for the implementation of the Load Based Licensing Scheme has been drafted.

### **Incentives**

- The Ministry of Industries facilitates obtaining ISO 14,000 certification for industries.

- The environmental licensing scheme (EPL) and the EIA process have been introduced for the polluting industries under National Environment Act.

- Polluter Pays Principle has been recognized in the National Environmental Policy and the National industrial Management Policy.

- Application of Polluter Pays Principle for implementation of the load based licensing scheme to minimize the discharge of hazardous and other wastes under the EPL System.

- Completed a project to evaluate the potential of application of Market Based Instruments (MBIs) in Sri Lanka in collaboration of UNEP. The report is available for implementation.

### **Industry**

- A collection mechanism has been initiated by the private sector for mobile phones under Corporate Social Responsibility Regime. Further developments in this area are quite important.

- Several industries carried out waste audits in collaboration with the National cleaner Production Center to evaluate waste reduction methods that can be undertaken by them.

### **Others**

#### **Thailand**

#### **Year**

2007

#### **Policies**

On 3 November 2006, the Prime Minister of Thailand had presented the government

policy delivered to the National Assembly. As to the Natural Resources and Environment, the Government need to create the equilibrium between the conservation and the utilization of sustainability of natural resources in order to raise the good environmental quality in correspondence with the national economic by using the integration of economic measures and the environmental management for public participation and fairness.

In addition, based on the integrated waste management and life cycle approach, Thailand has also developed the strategic plan on special wastes, such as packaging wastes and waste from electrical and electronic equipments, which has introduced the Polluter Pays Principle by taking into account the responsibility of producer, importer and consumer and the promotion of 3Rs as a vital tools for the environmentally sound management.

### **Legislation**

According to the Notification of the Ministry of Industry B.E. 2548 (2005) issued pursuant to the Factory Act B.E. 2535 (1992) on Disposal of Wastes or Unusable Materials, Factory operators having hazardous wastes which have such characteristics and properties as defined in the notification must carry out the disposal of the wastes or unusable materials as defined as follows:

- Wastes and unusable materials shall not be stored in the factory longer than 90 days without prior approval by the Department of Industrial Works (DIW). The storage of wastes and unusable materials in the factory shall comply with the provisions in the Notification of the Ministry of Industry B.E. 2547 (2004) on Manifest System.
- Wastes and unusable materials shall not be taken out of the factory except with prior approval from the Director-General of DIW or the person assigned by the Director-General to take them out to disposal or recovery by method and at the place according to the criterion and the method defined in Annex 4 of the Notification and only by the permitted waste collector, transporter, and processor. If the treatment and disposal of wastes and unusable materials within the factory shall comply with the provisions provided in section 4, article 17 and article 21-24 of the Notification.; and
- Details on type, quantity, characteristics, properties and storing place of such hazardous wastes or unusable materials concerned as well as method of storage, detoxification, disposal, discarding, landfilling and transport according to "Form Sor Kor 3", attached to the notification must be yearly notified to the Department of Industrial Works within the third of March of the next calendar year.

Additionally, the separation, collection, transportation, treatment and disposal of infectious wastes generated from hospitals, clinics and health care service centers have been complied with the Regulation of the Ministry of Health on the Disposal of Infectious Waste B.E. 2545 (2002).

### **Incentives**

Tax differentiate, e.g. the different excise tax rate for recyclable batteries production which is rebated 5% of the excise tax, unleaded gasoline (ULG);  
Tax exemption, e.g. equipment for the control, treatment or eliminate pollutants;  
Deposit-refund system, e.g. bring-back program, this system will be used as a tool for subsidizing the consumer to return the remains of products containing hazardous substances such as batteries for final disposal or recovery;  
The environmental fund is established for the environmental sound management activities in accordance with item 2 "Environmental Fund" of the Enhancement and Conservation of the National Environment Quality Act B.E. 2535 (1992); and  
The Thai green label scheme project is established for developing the criteria on the clean or waste minimized products (e.g. no mercury added dry cell batteries, recyclable plastic products, etc.).

**Industry** In cooperation and support from relevant authorized agencies, 6 categories including plastics, agro, pulp and paper, electroplating, dyeing and tannery industries have been in the process of developing clean technologies and waste minimization methods.

The co-incineration of wastes in cement kilns as one optional waste disposal other than landfilling, since 2001. The benefits of this program are both energy and material recovery. The program also included the energy replacement for coal/coke and the material replacement for raw material used in the cement kiln process. There are currently seven cement manufacturers expanded their capability in co-incinerators of hazardous wastes.

Currently, pilot project on waste exchange programs are being conducted in Thailand to encourage recycling in industries. This program is based on the premise that one industry's waste is another industry's raw material. Companies match their waste disposal and their raw material needs through a computerized database, and subsequently exchange waste. For the supplier of the waste, these types of transactions avoid disposal costs, while the user; the purchase of used raw materials can be done at lower prices than that of new materials and can be reduced the energy needed during the manufacturing processes. As of 2004, over 400 industries had registered on the waste exchange database established by Ministry of Industry.

Additionally, at the local level many successful programs have been implementing, for example. Some local communities have conducted their own waste management program based on the 3Rs, such as source separation program, waste recycling in school. Such programs can reduce more than 30% of total waste generated in the community.

**Others** The following methods have been used as support tools to reduce and/or eliminate generation of wastes:

ISO 14000s, ISO 18000, Life cycle Assessment and Greening of Supply Chain etc.;  
Research on clean technologies and waste minimization e.g. research on cleaner production in the dyeing and synthetic rubber industries; and  
Technical guidelines on the environmental sound management of hazardous wastes generated from communities e.g. laboratory waste, commercial waste, infectious waste, vessel and port waste.

## **United Arab Emirates**

**Year** 2007

### **Policies**

**Legislation** Regulation on Handling of Hazardous substances, Hazardous Wastes and Medical Wastes (2001)

Article (10)

General Rules and Procedures for Hazardous Waste Management

1.Generation of Hazardous Wastes

Parties generating hazardous wastes shall observe the following:

a) Endeavour to reduce generation rates of such wastes in both quality and quantity by developing the utilized technologies and adopting clean production principle and the selection of product or raw material alternatives of lesser damage to the environment.

b) Describe and record the quality and quantity of generated wastes.

c)Construction and operation of waste treatment units in the source subject to the competent authority's approval of treatment method, technical specifications and operation programmes of such units. If the treatment or disposal of hazardous wastes in their source was impossible, the generating party shall collect and transport them to the places allocated to such purpose as determined by the competent authority.

***Incentives***

***Industry***

***Others***

There is a plan to Establish Clean Production Center of the United Arab Emirates.

**Viet Nam**

***Year***

2007

***Policies***

National Strategy on Environmental Protection until 2010 and Vision toward 2020: The first specific objective is pollution reduction and the first main task is pollution prevention and control. Waste recycling is encouraged.

Resolution 41-NQ/TW dated 15 November 2004 of the Politburo on enhancement of environmental protection in the industrialization and modernization of the country: aims at pollution reduction, including pollution control at source and waste recycling.

***Legislation***

Law on Environmental Protection in 2005 (enter into force since 1 July 2006) encourages waste reduction and recycling as well as stipulates responsibility of generators for waste minimization.

Decision No. 23/2006/QĐ-BTNMT dated 26 December 2006 of Minister of Natural Resources and Environment issues the List of Hazardous Waste

Circular No. 12/2006/TT-BTNMT dated 26 December 2006 of Minister of Natural Resources and Environment on guidance of professional conditions and procedure for application, register, permit and code of hazardous waste management profession.

***Incentives***

Law on Environmental Protection in 2005 (enter into force since 1 July 2006):

-Organizations, households and/or individuals that have production or business of products related to long term adverse impact on environment and human health have to pay environmental tax.

-Individuals and/or organizations that discharge into environment or cause harm to environment have to pay environmental fee.

Decree No 67/2003/ND-CP dated June 13, 2003 on environmental fees for waste water.

***Industry***

In carrying out production, business and other activities, all organizations and individuals must implement measures for environmental sanitation and have appropriate waste treatment equipment to ensure compliance with environment standards and to prevent and combat environmental degradation, environmental pollution and environmental incidents (Law on Environmental Protection in 2005). Application of Cleaner Production and ISO 140000 is increasing

***Others***

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***UN Region:*** *Western Europe and Others*

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**Andorra**

***Year***

2007

***Policies***

The article 4 of the waste law "Llei 25/2004, del 14 de desembre, de residus", establishes a hierarchical criterion for waste management and the order is as follows:

Prevention, reuse, recycling, energetic valorisation and elimination.

National Waste Plan (2000), which came into force in 2001, defines the government policy in the field of solid wastes. This plan has been reviewed in 2006 for the period 2007-2011. A very precise diagnostic has been done, and on that basis, recovery objectives have been fixed. The plan also foresees all the basic and essential facilities that must exist in the country. The National Waste Plan must be reviewed every 5 years.

**Legislation**

**Incentives** See article 48 (law: "Llei 25/2004, del 14 de desembre, de residus ")

**Industry** Legislation about hazardous waste management (13-07-2005)

**Others**

**Australia**

**Year** 2007

**Policies** In Australia, municipal waste management is generally the responsibility of state, territory and local governments. The eight Australian States and Territories have economic measures/initiatives in place to reduce and/or eliminate the generation of hazardous wastes and other wastes.

Sector specific product stewardship arrangements:

Through the Environment Protection and Heritage Council (EPHC), Australian governments are working with the relevant industry associations to negotiate co-regulatory product stewardship arrangements for the tyre, television and computer sectors. A voluntary scheme is already in place for mobile phones.

If agreed, the co-regulatory product stewardship arrangements would recognise these products are part of national markets and deliver through sector wide agreements nationally coordinated voluntary solutions for these products at end-of-life. The arrangements would provide for regulation of those companies that choose not to participate in the voluntary schemes. This would ensure those parties participating in the voluntary schemes are not competitively disadvantaged in the market place. Also, through the EPHC, governments are considering how Australia might harmonise with current international efforts to restrict the use of certain hazardous materials in electronic products that include TVs, computers and mobile phones. One option that is being explored in earnest is a voluntary industry Code of Practice. Product stewardship arrangements are already in place for newsprint (through voluntary industry arrangements), and packaging (a co-regulatory arrangement)

Australia's EnviroNET is a directory of Australia's environment industries including databases of environment management expertise, industry applications for environmental technologies, environmental education; plus a range of other resources to support development and uptake of Australian solutions to industry's environmental issues.

**Legislation**

**Incentives** Product Stewardship Arrangements for Used Oil: These arrangements were introduced in 2001 by the Australian Government to provide incentives to increase used oil recycling. The arrangements comprise a levy-benefit system, where a 5.449-cent per litre levy on new lubricating oil underwrites benefit payments to used oil recyclers. The Arrangements, administered by the Australian Taxation Office and the Department of the Environment, Water, Heritage and the Arts aim to encourage the environmentally sustainable management and re-refining of used oil and its re-

use. In the year 2007 Australians recycled approximately 210 million litres of their used oil which is a slight drop from the 214 million litres reported for 2006.

**Industry**

**Others**

**Austria**

**Year** 2007

**Policies** Waste avoidance was already a basic principle of the Austrian Waste Management Act 1990. New legislation was including the principles of sustainable development was prepared in 2001 and enforced in 2002 (Act on sustainable Waste Management; Fed. Law Gaz. I 2002/102). The national strategy is laid down in the Federal Waste Management Plan (latest edition 2006).

**Legislation** Branch specific concepts for hazardous waste management (including waste avoidance) (based o the Federal Waste Management Act and the Act on Chemical Substances (Fed. Law Gaz. I Nr. 53/1997 as amended) where drafted by the Federal Ministry. Detailed information is available via the home page [www.lebensministerium.at](http://www.lebensministerium.at)

A specific Ordinance on Waste Treatment Obligations was published (Fed. Law. Gaz. II 2004/459) and enacted 13th August 2005. The Ordinance on Waste Treatment Obligations defines minimum requirements for the collection, storage and treatment of the following waste streams:

- batteries and accumulators
- solvents and wastes containing solvents, waste paints and varnishes
- medical wastes involving the risk of injury
- residual amalgam
- PCB-containing electrical equipment and other PCB-containing wastes

The party obligated is the waste holder (original waste producer, waste collector or waste treatment operator). If the waste holder is not authorized or able to treat the waste appropriately, he shall according to § 15 Par. 5 Waste Management Act 2002 hand over the waste to a party authorized to collect or treat the waste within due time to prevent impairments of the public interest (§ 1 Par. 3 Waste Management Act 2002).

The text of the Ordinance is available via Internet:

[http:// www.lebensministerium.at/article/articleview/32554/1/6969/](http://www.lebensministerium.at/article/articleview/32554/1/6969/) (German and English)

**Incentives** Federal Act on the Financing and Implementation of the Remediation of Contaminated Sites (ALSAG, Fed. Law Gaz. 289/1989 as amended). The charge is donated for clean up procedures.

Several funds for subsidies for environmentally sound treatment/production exist.

**Industry** Waste management concepts provided by each company with more than 20 employees.

**Others**

**Belgium**

**Year** 2007

**Policies** Prevention of waste is very important in the European and the Belgian waste policy. Also the use of certain dangerous products is forbidden by European legislation.

**Legislation** FLANDERS

It is an aim of the Flemish policy to protect public and environmental health against damaging influences of wastes and to prevent squandering of raw materials and energy by (in the following order of priority):

- Preventing and reducing waste production and preventing or reducing the damaging features of wastes;
- Promotion of waste recycling; and
- Organising the disposal of all the wastes which cannot be prevented or recycled. (article 5 of the Waste Management Decree of 20.04.94).

Below some of the initiative are enumerated which are taken in Flanders to prevent waste from arising.

- PRESTI: Under the so-called PRESTI programme, companies that invest in techniques that contribute to waste reduction can get financial support from the Flemish government.

The fifth edition of PRESTI started in 2002 and ended in 2008. New in PRESTI 5 was that not only enterprises and their intermediaries could receive support, but also research and education institutions, environmental and socio-cultural associations, etc.

The main goal of all the PRESTI-programmes was spreading the message that prevention is worth while and showing succesfully executed prevention projects. Through the intermediaries, a lot of enterprises were reached.

The following subsidies were granted for the various PRESTI-programmes: 3.200.000 Euro (PRESTI 1), 560.000 Euro (PRESTI 2), 407.000 Euro (PRESTI 3), 1.622.000 Euro (PRESTI 4) en 2.980.000 Euro (PRESTI 5).

- Reuse centres: Since 1995, the OVAM (Flemish Public Waste Agency) has helped to set up a network of 35 reuse centres with 100 shops. They collect reusable furniture, electrical and electronical equipment, toys and clothing for free and resell those goods at a low price. Reuse centres collect around 6 kg of goods to be given a second life per inhabitant per year.

- Awareness-raising for local authorities: Through a newsletter information is spread. Last year a software application came on line which helps local authorities to evaluate their procurement, [www.ovam.be/producttest](http://www.ovam.be/producttest). For office supplies and cleaning products environmental criteria are available to be integrated in tenders.

- Ecodesign: Due to the increasing pressure of the actual world economy on the global ecosystem, action is needed for the future. Present pressure should be halved. In 2040 this pressure will be increased to five times the actual pressure. Our products should only need a factor 10 then of what they need now on materials, energy, etc. This is possible by designing the products of tomorrow using ecodesign. The objective of the ecodesign actions of the OVAM is to provide information and support on ecodesign to designers and companies in Flanders.

- Awareness-raising in schools: MOS-schools try to integrate environmental care in school life. They help to raise the demand for environmental friendly school supplies and learn the kids another attitude towards environment. The project was started in 2002 and is renewed annually.

- Ecolizer: In an effort to make ecodesign more accessible to the designer, the OVAM developed the Ecolizer, a modern tool that is quick and can be easily

consulted during the design process. The tool was developed for designers or product producing companies as an introduction to ecodesign and life cycle thinking and allows designer to assess the most important environmental impacts of their products. The idea for the Ecolizer derived from the fact that despite the availability of a lot of academic information and software on ecodesign, it is rarely applied by Flemish designers or companies. The Ecolizer, which consists of a number of cards put together in the form of a fan, brings part of this academic background closer to the designers to enable them to integrate environmental criteria in innovative products. The Ecolizer uses the single indicator methodology of the eco-indicator '99 method. The lay-out of the original tables was altered so that each material now has the relevant production, tooling and waste management indicators on one card. The Ecolizer features 400 indicators, based on European and Flemish data, is written in Dutch, but will be translated in the near future.

- The Ecodesign awards: To encourage designers that integrate environmental criteria into their design the OVAM organises annual Ecodesign Awards for students and professionals.

- The inspiration database: The inspiration database or database of good examples can be found on the OVAM website and is meant to inspire those companies and designers that aren't yet convinced that environmental measurements can be part of a realistic approach to good design and competitive products.

## WALLONIA

The Walloon Government's action plan reflects the wish to reduce the quantity of hazardous waste and the degree of hazard represented by waste that are produced.

In order to reduce the quantity of waste, the Government is introducing a new waste reduction target:

- The "polluter pays" principle and the principle of producer responsibility in accordance with waste management plan;
- Lowest priority to landfilling and introduction of landfill tax;
- Highest priority to the waste treatment in the form of recycling encouraged by regional authority investments and increase in the private undertaking;
- Adoption of cleaner process techniques by industries, using of resources more effectively and re-using or sale of by-products;
- Adoption of more suitable consumption patterns by consumers, for example, buying products with minimal packaging or/and re-use; and
- Use of agreements as management tools to promote the overall principle of answerability of waste generators and market orientation in the field of waste and recycling.

In order to reduce the degree of hazard represented by waste to be landfilled, following suitable treatment are used: physical treatment (solidification/ stabilization and deshydration); biological treatment (biological activity); and physico-chemical treatment (dechlorination; dechromatisation; and decyanurisation). These objectives were translated into Government Action Plan and into a decree on waste on 27 June 1996.

## BRUSSELS

The framework directive of the Brussels Government on waste prevention and management of 1991 allows the Government to take measures to prevent or reduce

production of waste and their harmfulness:

- by encouraging development of cleaner technologies and technologies needing less natural resources,
- by encouraging development of products conceived in a way that their production, their use or elimination provokes the minimum on waste,
- by developing appropriate techniques for elimination of hazardous substances in waste.

The third waste prevention and management plan 2003-2007 was adopted in November 2003. This plan confirms the waste management hierarchy, it gives priority to prevention and re-use, followed by recycling and energy recuperation, and disposal coming as a last resort. It introduces the concept of dematerialisation of waste. The aim of dematerialisation is to maintain current levels of economic development and well-being while consuming fewer material and energy resources. By focusing on a policy of dematerialisation, the Region will create an important link between waste policy and product and resource policies and will help to uncouple increased waste production and economic growth. The principle of producer's liability is reiterated. Its extension to hazardous waste flows is planned, including hazardous waste produced in scattered amounts, such as neon tubes, waste from do-it-yourself products, etc. For the management of non-household waste, the new plan provides for public awareness measures to favor the elimination of hazardous waste from small and medium-sized enterprises and a study of incentives to promote proper disposal of hazardous waste (private financing, positive economic return and "return" brand). The Region likes to set up a network of voluntary return of waste (hazardous or not) by self-employed persons and SMEs, better control on the disposal of hazardous waste. Sector-based prevention plans will be promoted and debated with the public.

On prevention, some actions aiming at the reduction of the waste generation are carried out in three phases: providing information and research on sustainable consumption, putting in place pilot projects to demonstrate results, informing and creating awareness among the public. 90% of SMEs are active in the administrative or service sectors, in the Region. Therefore three preferential targets have been selected: households, schools and businesses.

For the households, several aspects are under scrutiny at the moment:

- interior pollution,
- alternatives for hazardous domestic products,
- well considered purchasing,
- well considered uses.

Several programs are implemented:

- the eco-construction strategy takes into account the interior pollution and the use of ecological alternatives for construction materials,
- the awareness raising campaigns aim at certain products as generator of hazardous waste (i.e. batteries), hazardous products used at home, health and environment with his green ambulance "Regional cell for intervention concerning interior pollution."

Awareness raising in businesses: Training is organized for companies applying for the "Eco-dynamic Business" label. This training focuses on subjects such as waste take back obligations or purchases of environmentally friendly products or services for office maintenance.

Awareness raising campaigns are organized per activity sector for the prevention and management of the waste streams (dry cleaning, coach work, garage, construction sector....). Information is distributed by 'The Business and Environment Bulletin', sector publications, 'good practices' publications,...

### *Incentives*

#### BELGIUM

-Ecotax: Since July 1993 a national law introduced taxes on certain consuming products that are considered to be harmful to the environment (soda packaging, batteries, pesticides, paper etc.).

-MAMBO: MAMBO is the Dutch abbreviation of "Less Waste, More Profit". By means of a software package developed by the Flemish Public Waste Agency, companies are able to calculate the exact cost of their waste production. The objective is to bring about awareness about this topic and to focus on waste prevention.

#### FLANDERS

-Eco-efficiency scan program: In 2006, the Flemish Public Waste Agency developed the eco-efficiency scanprogramme for small and medium-sized enterprises (SMEs) in Flanders. The programme is intended to help SMEs identify the potential for improvements towards eco-efficiency. By making their company more eco-efficient, SME's can combine environmental profit with economic advantage. The program consists of an audit and 2 follow-up moments. These three steps are undertaken by a SME in a period of one year. To professionally support SME's, the Flemish Public Waste Office annually outsources the concrete implementation of the eco-efficiency scanprogramme to specialized consultants. The Flemish Government covers the expenses for this professional guidance. This means that the program is free of charge for the SMEs.

The basis of the program is the audit which is carried out by means of an eco-efficiency scaninstrument. This instrument consists of a checklist with questions divided into 5 modules. Those modules refer to the 5 fields of eco-efficiency: processes, products (ecodesign), waste valorisation, market and management. The five modules have been subdivided into several aspects, 35 in total. The module 'processes', for example, is subdivided into 'waste', 'air pollution', 'energy use', 'water use and waste water', etc.

Over a period of 3 years, the eco-efficiency scanprograame aims at the participation of 1.000 Flemish SMEs.

-Flanders applies the 'polluter pays' principle. The charges for waste collection are differentiated so as to stimulate people to sort out their wastes. Mixed wastes have become quite expensive to discard, while separated wastes can be discarded at a low price or even for free.

-'Smart' taxes: So-called smart taxes are used in order to make landfilling more expensive than incineration, and make (co-)incineration more expensive than recycling. The idea is to steer the market to those waste treatment options that have the lowest environmental impact.

-Extended producer responsibility (EPR) schemes in the form of "acceptance or take back obligations" have been incorporated in Flemish waste legislation. Producers are made financially responsible for the collection and treatment of their products once they have become waste. The waste streams for which extended producer responsibility is provided for in Flemish legislation are printed paper, batteries, waste pharmaceuticals, end-of-life vehicles, waste tyres, waste electrical and electronic appliances, lighting equipmentwaste industrial and cooking oils. By making producers (or importers) responsible for bearing the cost of the waste disposal, ecodesign is stimulated.

-Environmental Policy Agreements (EPAs) have been concluded between the government and industry. These EPAs stipulate how prevention and selective collection will be realized in a particular sector, who will finance this and who will monitor and report on the implementation of the requirements set out in the agreement. EPAs differ from traditional legislation, in that they are developed by the government and industry in collaboration. As such, the government has access to the first-hand expertise of the business world. For the enterprises, the EPA offers the following benefits: opportunity to participate in the policy making process, legal security and the possibility to build a positive environmental image.

#### BRUSSELS

- The producer liability system is a key element of the Third Waste Prevention and Management Plan (2003-2007) of Brussels. The plan provides that manufacturers must bear the real and full cost of waste created by their products.

- Brussels has one incinerator. Fees for collecting and treating non-household waste are variable so as to encourage the sorting and recycling of waste.

- Brussels will study different economic instruments to improve the management of hazardous waste: positive economic return, private financing, introduction of a "return brand", and soon.

#### *Industry*

Packaging prevention plans by packaging companies.

#### *Others*

#### FLANDERS

The environmental management plan MINA 2003-2007 which indicates the environmental policy of Flanders, describes some actions to reduce and/or eliminate generation of hazardous and other wastes:

- action 9: Determine goals for the prevention, reuse and recycling of industrial waste that have to be tackled first.

- action 10: Reduce the disposal of high calory waste to a minimum and increase the energy recovery of non-recycable waste to a maximum, with respect for the environment.

- action 11: Develop a source-oriented waste policy approach.

- action 12: Obtain the objective of 13% prevention in 2007 of household waste compared with 2000. The aim is to decouple the generation of waste from economic growth.

#### WALLONIA

- Development of production technology to minimize the production of hazardous waste; and

- Development of technology to neutralize hazardous waste.

#### **Canada**

#### *Year*

2007

#### *Policies*

In Canada, both mandatory and voluntary plans and programs exist. They are set up by the federal and provincial/territorial governments and by municipalities. In general, provincial and municipal plans tend to be mandatory, whereas federal plans are voluntary. Some examples are as follows:

•Section 188 of the CEPA 1999 gives the authority to the Minister of the Environment to require an exporter or class of exporters of hazardous waste or non-hazardous waste for final disposal to submit and implement a plan "for the purpose of reducing or phasing out" those exports. Once such a requirement is imposed, the Minister may refuse to issue an export permit if the plan is not submitted or implemented.

- Section 191(g) authorizes the Government to develop regulations respecting these plans referred to subsection 188(1), "taking into account: i) the benefit of using the nearest appropriate facility, and ii) changes in the quantity of goods the production of which generates hazardous waste to be disposed of by an exporter or class of exporters."

- The Toxic Substances Management Policy puts forwards a precautionary and preventive approach to deal with substances that enter the environment and could harm the environment and/or human health. It provides a framework for making science-based decisions on the effective management of toxic substances by a two track approach. The first track is the "virtual elimination from the environment of toxics substances that result predominantly from human activity and that are persistent and bioaccumulative" and the second track encourages "management of other toxic substances and substances of concern, throughout their entire life cycles, to prevent or minimize their release into the environment".

[Http://www.ec.gc.ca/toxics/TSMP/en/execsum.cfm](http://www.ec.gc.ca/toxics/TSMP/en/execsum.cfm)

### Chemicals Management Plan

The Government of Canada plays a key role in protecting the environment from the risks of chemical substance under a number of laws. Under the Canadian Environmental Protection Act, 1999 (CEPA 1999), for instance, scientists at Health Canada and Environment Canada assess chemical substances to determine if they pose a risk to human health and/or the environment. The Government of Canada develops regulations and other measures based on the findings of these assessments. Canada's new Chemicals Management Plan is designed to further protect the environment through new regulations under CEPA 1999 and other acts, a challenge to industry, restricted uses, accelerated re-evaluations of some older pesticides, and changes to the way we dispose of pharmaceuticals and personal care products. While the Government of Canada plays a key role, every order of government is involved. Municipalities run programs and make rules on such pollution prevention activities as recycling. The provinces and territories govern a number of areas related to risks of chemical substances, for example, industry permits and licences. More information on the Chemicals Management Plan is available at [http://www.chemicalsubstanceschimiques.gc.ca/substance/what-quoi/index\\_e.html](http://www.chemicalsubstanceschimiques.gc.ca/substance/what-quoi/index_e.html)

### The National Pollutant Release Inventory

The National Pollutant Release Inventory (NPRI) collects and makes publicly available information from industrial facilities on their releases, disposals and recycling of over 300 pollutants. Reporting is mandatory, under the Canadian Environmental Protection Act 1999, for those facilities that meet the reporting requirements identified in the annual NPRI Notice in the Canada Gazette. The NPRI includes reporting on amounts of NPRI substances contained in waste that is transferred off-site, as well as the destination of the transfer. Information about the NPRI can be found at; [http://www.ec.gc.ca/pdb/npri/npri\\_home\\_e.cfm](http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm).

### Pollution Prevention

The Canadian Government believes that pollution prevention is the most effective means of protecting the environment and minimizing costly waste. Pollution prevention is defined in CEPA 1999 as "the use of processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and waste and reduce the overall risk to the environment or human health." Pollution prevention planning is a systematic, comprehensive method of identifying and

implementing pollution prevention options to minimize or avoid the creation of pollutants or waste. For example, Environment Canada will require pollution prevention plans from vehicle manufacturers and steel mills for mercury releases from mercury switches in end-of-life vehicles processed by steel mills. Program details can be found on the following website:  
<http://www.ec.gc.ca/cppic/en/index.cfm>

#### Metals and Minerals Policy

The Minerals and Metals Policy of the Government of Canada outlines a number of policy options for the sustainable development of Canada's mineral and metal resources. The policy was developed in the mid 1990's and approved in 1996 to address the economic, social and environmental challenges and opportunities for this important sector of the Canadian economy and is the product of intense consultations. With respect to materials management, the Policy recognizes the use of risk assessment and risk management together with life cycle management. The Policy contains the Safe Use Principle for minerals and metals, which is designed to address human health and environmental issues through a life-cycle thinking approach that incorporates both risk-assessment and risk-management principles. The Safe Use Principle recognizes that inorganic materials such as minerals and metals and their products can be produced, used, re-used, recycled and returned to the environment in a manner that is consistent with sustainable development. Canada's response to the risks associated with the sources and uses of mercury is an example of the application of this Principle.  
<http://www.nrcan.gc.ca/mms/policy/mmp-e.pdf>

#### Extended Producer Responsibility (EPR)

Extended Producer Responsibility (EPR) programs are commonly funded by advance disposal fees commonly applied at the point of purchase. These monies are managed by not for profit industry producer responsibility programs to pay for the recovery, recycling and environmentally sound management of the designated wastes. In some cases, these fees are not visible to the consumer but are applied at some other point in the supply chain. EPR programs operating at both a national and provincial level exist for pesticide containers, tires, paint, crankcase oil, packaging, refrigerants, and electrical and electronic equipment.  
<http://www.ec.gc.ca/epr/>.

### ***Legislation***

#### ***Incentives***

A variety of economic instruments are used in Canada to promote waste reduction. Some examples include:

Tipping fees are levied on waste disposal at landfill sites, incinerators and waste processing facilities by both municipalities and private sector facility operators. These fees are subject to provincial and federal value added tax (Goods and Services Tax, Provincial Sales Tax, Harmonized Sales Tax). The Province of Quebec has introduced a regulation requiring \$10 CDN for each ton of residuals going for disposal. The collected money is used to finance waste management activities.

Many municipalities use a partial or full user-pay system for residential solid waste management above a basic collection service of one or two bags per week with additional charges for every extra container.

Deposit return systems are also widely used for beverage containers and have proven to be very efficient ways to divert material from landfills. Many Canadian provinces

are using this system. For example, please refer to the following link for information on the Ontario deposit return program:

<http://www.bagitback.ca/bagitback/en/index.shtml>

Municipal solid waste and hazardous waste minimization projects are eligible for funding under various programs. Some examples include:

#### Green Municipal Fund (GMF)

The Federation of Canadian Municipalities' (FCM) Green Municipal Fund (GMF) was established by the Government of Canada to stimulate municipal investment in innovative environmental infrastructure projects and practices by offering grants for feasibility studies and low-interest loans to: improve air, water and soil quality; protect the climate; remediate brownfields; and promote the use of renewable resources. Additional information is available on the FCM website at [www.fcm.ca](http://www.fcm.ca).

#### Canadian Environmental Technology Advancement Centre (CETAC)

With support from Environment Canada, the Canadian Environmental Technology Advancement Centres (CETACs) help small and medium sized enterprises (SMEs) commercialize innovative environmental technologies that address Canada's environmental priorities. They provide a wide range of services tailored to SME client needs, including assistance with accessing funding sources and investment capital, general business development counselling, technical services, market analysis, and strategic advisory and mentoring services. The Centres also help SMEs lessen their environmental impact by assisting them in adopting pollution prevention, and sustainable development practices and solutions. As private sector, not for profit corporations, the CETACs operate at arm's length from the federal government and is comprised three regional centres. More information is available at: <http://www.etvcanada.ca/CETAC.asp>.

#### Sustainable Development Technology Canada (SDTC)

Established by the Government of Canada in 2001, Sustainable Development Technology Canada is a Foundation whose mandate is to foster the rapid development and demonstration of innovative sustainable development technologies that address greenhouse gas emissions and that protect the quality of Canada's air, water and soil. Waste management is included as one of the program's sectors for funding. More information can be found on the SDTC website at [www.sdtec.ca](http://www.sdtec.ca).

In addition, support for waste management projects exists through several funding programs under Infrastructure Canada and Industry Canada. More information is available at [www.infrastructure.gc.ca](http://www.infrastructure.gc.ca) and [www.ic.gc.ca](http://www.ic.gc.ca), respectively.

### ***Industry***

Economic and consumer pressures have influenced industry and the non-for-profit sector to advocate waste reduction on a voluntary basis. Some of the initiatives include:

#### Environmental Choice Program (ECP)

The ECP is Environment Canada's eco-labelling program, which may be of assistance to companies in validating and marketing their products. The Program determines and promotes higher standards of environmental performance against which products and services can be assessed. Once a product or service is certified by the ECP, the company is entitled to incorporate Environment Canada's official mark of environmental leadership, the EcoLogo, in their advertising and

promotional efforts. This label helps to assist purchasing offices and consumers in making informed, environmentally conscious choices when selecting products and services. The program meets the requirements of ISO 14024 Type 1 eco-labels <http://www.environmentalchoice.com/>

#### Corporations Sharing Responsibility (CSR)

This is a national organization representing the stewardship interests of their Canada-wide members. CSR monitors extended producer responsibility (EPR) policies that are currently in place, and the developments in emerging policies that will face companies operating in the Canadian marketplace in the future. <http://www.csr.org/>

#### The Composting Council of Canada (CCC)

It's a national non-profit, member-driven organization with a charter to advocate and advance composting and compost usage. It serves as the central resource and network for the composting industry in Canada and, through its members, contributes to the environmental sustainability of the communities in which they operate. <http://www.compost.org/>

#### The Environment and Plastics Industry Council (EPIC)

This is an industry initiative dedicated to sustainable plastics recycling and to minimizing plastic waste sent to landfill. EPIC facilitates the development of sustainable programs to effectively manage plastics waste and acts as a resource to individuals, groups, companies and the educational community. EPIC is a council of the Canadian Plastics Industry Association (CPIA). <http://www.plastics.ca/epic/>

#### The Rechargeable Battery Recycling Corporation (RBRC)

The Corporation is dedicated to recycling small rechargeable batteries found in portable electronic products such as cell phone and cordless phone, power tools, laptop computers, camcorders, two-way radios and remote control toys. <http://www.rbrc.org/>

#### Enviroclub Program

The program developed by Environment Canada and Canada Economic Development helps small- and medium-sized companies (SMEs) improve profitability and competitiveness through environmental performance. The general program objective is to make SMEs aware of pollution prevention and environmental management in order to improve their profitability and competitiveness. Program details can be found on the following website: <http://www.enviroclub.ca/en/stories/index.php>

#### Responsible Care

Launched in 1985 by the Canadian Chemical Producers' Association (CCPA), Responsible Care is a unique "ethic" for the safe and environmentally sound management of chemicals. It is guided towards environmental, societal, and economic sustainability and represents a global commitment to the responsible management of chemicals through their entire life cycle and to social responsibility. <http://www.ccpa.ca/ResponsibleCare/>

#### *Others*

In Canada, waste minimization is promoted by various provinces/territories and organizations. For example, provinces and territories mandate specific levels of diversion for municipal governments through legislation. Municipalities provide information on waste reduction including recycling and recycling programs in their

local community including household hazardous waste management. For links to provincial governments website, see <http://www.ec.gc.ca/wmd-dgd/default.asp?lang=En&n=7DA57C1E-1>. For general information on the Federation of Canadian Municipalities, see <http://www.sustainablecommunities.fcm.ca/>.

Not-for-profit organizations such as recycling associations promote and facilitate waste reduction, recycling, and resource conservation in their provinces and territories. Links to their websites can be found at <http://www.wrwcanda.com/links.htm>

Waste Reduction Week (WRW) in Canada is a national program that focuses on the 3Es of the 3Rs - Education, Engagement, and Empowerment. WRW brings together many partners including organizations, municipalities, businesses, schools, and individuals. The program's educational resources and "take action" messaging empowers Canadians to adopt more environmentally conscious choices, and in turn, reduce waste. More information is available at <http://www.wrwcanda.com>

## **Denmark**

*Year* 2007

*Policies* The Government's National Waste Plan 2005-2008 sets out the overall strategy for waste management and introduces a series of initiatives for treatment of waste. The reduction and/or elimination of hazardous waste is not only based on a separate strategy but is also based on bans and phasing out of chemicals which is implemented through the national strategy of chemicals.

*Legislation* See National Waste plan for general information on legislation, regulation and guidelines.

*Incentives*

*Industry* Environmentally sound management, ISO- and EMAS- systems are widespread in industries. New initiatives are set out in the coming strategy for waste prevention.

*Others*

## **Finland**

*Year* 2007

*Policies* The first National Waste Plan Until 2005, which came into force on 1 August 1998, set targets, among other things, for the reduction of the amounts and harmful properties of waste. The Plan presents the administrative and legal, economic and informative instruments to be used in implementation. The targets are set for and the measures geared to the years 2000 and 2005. The plan was updated in 2002.

In 2008 the Government approved a new National Waste Plan until 2016. This strategic plan determines the principles and the objectives of the waste management and the waste prevention. For each goal and objective, a policy instrument has been proposed and a responsible body for the implementation has been identified. Finland's waste policy is aimed at the waste prevention and decreasing the negative effects of waste on human health and the environment.

The waste management goals, and the policy instruments that are required for reaching the goals set, are described by eight main themes:

1. Improving the materials efficiency of production and consumption
2. Promoting recycling

3. Decreasing hazardous chemicals in waste
4. Reducing harmful effects on the climate from waste management
5. Reducing risks to health and the environment from waste management
6. Developing and clarifying the organization of waste management
7. Improving waste management know-how
8. Managing waste shipments safely.

The plan also suggests that industrial sectors should negotiate sector-specific agreements for promoting materials efficiency and, in these agreements, set targets for waste prevention and recycling. The national waste plan includes a separate national waste prevention program. A special follow-up program will be developed during the year 2009. The effectiveness of the plan will be estimated in 2010 and 2013.

Regional waste management plans have been drawn out for 13 regions. The plans specify measures to be taken in the regions in order to carry out and develop the tasks provided for or regulated in or under the Waste Act. They present data on wastes and the current state of waste management, the developing targets set and measures necessary to achieve them. One of the developing targets dealt with in the plans is the minimization of generation of wastes. The plans were revised between the years 2001 – 2004.

New regional waste plans are drawn by regional environment centres either separately covering their own area or in co-operation with other centres covering larger areas. Five regional waste plans are drafted at the moment and altogether they will cover the whole continental Finland. The new plans will be drawn up by the end of the year 2009.

### ***Legislation***

The Waste Act (1072/1993), which entered into force on 1 January 1994, introduces the general obligation to prevent waste generation and to reduce its quantity and harmfulness. In order to implement the general obligation, the Government may issue general regulations concerning the production and marketing of products. Such regulations have so far been issued for example on batteries and accumulators, ozone depleting substances, asbestos and impregnated wood.

The Environment Protection Act (86/2000) sets general regulations on the licensing of industrial facilities including waste disposal and recovery plants and major waste-generating industries. The Act aims at the reduction of the burden to the environment caused by various industrial operations as well as at the prevention of waste generation and reduction of their harmful effects. The Act replaced several previous regulations on facility licensing. According to the Act, the environment permit shall contain necessary regulations, among other things, in order to minimize the waste generated and diminish the harmful properties of wastes. The Act came into force on 1 March 2000.

### ***Incentives***

The Waste Tax Act (495/1996) came into force on September 1, 1996. The Act was amended in December 2002. According to the Act, from 1 January 2003 a State tax of 23 euros per tonne shall be paid on waste deposited at landfills operated by municipality or a body appointed by the municipality or a landfill which is operated primarily for the purpose of receiving waste by another party. The tax was raised to 30 euros per tonne on 1 January 2005. Some waste types are exempt from waste tax.

Some subsidies are awarded by the government to projects aiming at environmental protection. Among waste management projects, in general, the priority is given to

those projects which aim at the prevention of waste generation and the reduction of hazardousness of wastes.

### **Industry**

Various industrial establishments and waste generators continuously develop their process technologies e.g. in order to eliminate generation of hazardous and other wastes. In recent years a number of industrial establishments have also created their own environmental management systems on voluntary basis, for example, in accordance with the European Community Eco-management and Audit Scheme (EMAS), ISO 14001 or branch-specific programmes such as "Responsible Care" by the chemical industry. In December 2008, there were 49 EMAS-registered sites in Finland.

### **Others**

Waste and hazardous waste minimisation are also promoted by:

education and advisory services: it is a legal obligation for the Finnish Environmental administration (especially the Finnish Environment Institute and regional environment centres) and local authorities to provide advisory services on wastes to all interested parties (industry, commerce, households etc.). Advisory services include preparation and dissemination of information material (brochures, guidebooks, websites etc.), information campaigns, on-line advice, and training courses. Advice is given on all necessary issues related to wastes and their management but the main focus nowadays is on preventive measures. Advisory services are also provided by regional waste management organisations, private companies, producer corporations and environmental NGOs; and

ecolabelling, such as Nordic Swan Label and European Union Ecolabel, research programmes and R & D projects, such as the Environmental Cluster Research Programme co-financed by several ministries and academies which aim at seeking new ways of saving the environment and natural resources and at developing them into environmentally friendly products, production technologies and infrastructure, and various R & D projects financed by the National Technology Agency TEKES ([www.tekes.fi/eng/](http://www.tekes.fi/eng/)).

## **Germany**

### **Year**

2007

### **Policies**

### **Legislation**

Recycling Management and Waste Act (1994, amended in 2007) with supplementary regulations, in particular:  
Sewage Sludge Ordinance (1992, amended in 2002);  
Battery Ordinance (1998, amended in 2001);  
Waste Oil Ordinance (1987, amended in 2002);  
CFC-Ordinance (1991, amended in 2001);  
Ordinance on Bio-wastes (1998; amended in 2006);  
Packaging Ordinance (1998, amended in 2006);  
Ordinance on the management of waste wood (2003);  
PCB-waste Ordinance (2000);  
Ordinance on Underground Waste Stowage (2002, amended in 2004);  
Technical Instruction on the Management of Hazardous Waste (1991);  
Commercial Wastes Ordinance (2002);  
Waste Management Plans issued by the Federal States;  
Landfill Ordinance (2002, amended in 2006);  
Ordinance on Environmentally Compatible Storage of Waste from Human Settlements (2001, amended in 2002); and  
Ordinance pertaining to the recovery of waste at surface landfills (2005).

Federal Immission Control Act (1974, amended in 2005) with supplementary regulations; in particular: Ordinance on Waste Incineration Plants (1990, amended in 2003).

End-of-Life-Vehicle Act (2002) and End-of-Life-Vehicle Ordinance (1997, amended in 2006).

Waste Electrical and Electronic Equipment Act (2005).

Regulation of the European Parliament and the Council (EEC) No 761/2001 of 19 March 2001 allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

### ***Incentives***

#### ***Industry***

Environmental aspects are implemented in many German Industrial Standards (DIN). There is a “Manual on the Consideration of Environmental Aspects in Standardization and Development of New Products” (2001; DIN-Fachbericht 108).

Many enterprises from different branches of industry and administration participate in the eco-management and audit scheme (EMAS) or have achieved an ISO 14001 certification. More information is available from the Focal Point or <http://www.emas-register.de> and <http://www.iso14001-register.de>.

The German Environmental Label comprises more than 100 different product criteria (e.g. tires, copiers, paper) and several thousand labeled products. For further information see <http://www.blauer-engel.de>.

#### ***Others***

The German Federal Government adopted the National Sustainability Strategy on 17 April 2002. With its guiding principle as well as 21 goals and indicators for sustainable development it points out paths and prospects for a viable Germany in the 21st century.

On 30 June 2004, the Federal Cabinet adopted a new framework programme entitled "Research for Sustainability". Over the next five years, an average of €160 million will be made available for research for sustainable development in Germany under this framework programme for sustainability research, which is a major element of the innovation initiative for growth and employment as well as a sustainable society. For further information <http://www.bmbf.de> or <http://www.fona.de>.

### **Greece**

#### ***Year***

2007

#### ***Policies***

Based on EU legislation. Care is taken for the prevention and reduction of production of hazardous wastes by use of clean technologies and minimization of hazardous characteristics of the waste.

#### ***Legislation***

Common Ministerial Decision 11014/703/Φ104/20-3-2003, implementing Directive 96/61/EC concerning integrated pollution prevention and control (IPPC).

#### ***Incentives***

Financial support for the use of clean technologies is given to all parties involved.

#### ***Industry***

#### ***Others***

### **Ireland**

#### ***Year***

2007

#### ***Policies***

Local Authority Waste Management Plans (since 1998)

Responsible: Local authorities

Under the Waste Management Act, 1996 (as amended) all local authorities are required to prepare and implement a Waste Management Plan. These plans include objectives in relation to prevention and minimization of wastes. They also include objectives in relation to the recovery of waste.

National Hazardous Waste Management Plan

Responsible: Environmental Protection Agency (EPA)

Under the Waste Management Act 1996, as amended, the EPA is required to prepare a Hazardous Waste Management Plan for the country. This plan, which was published on 15 September, 2008 has regard to the prevention and minimization of hazardous waste and sets objectives and, where appropriate, targets in relation to the prevention and the minimization of hazardous waste, the minimization of the harmful nature of such waste and the recovery of hazardous waste.

National Waste Prevention Programme

Responsible: Environmental Protection Agency

The National Waste Prevention Programme (NWPP) has been running since 2004 and has developed a wide range of prevention initiatives. The National Waste Report provides statistics on hazardous waste to guide policy and target prevention efforts. A Prevention Plan 2009-2012 has been published ([www.nwpp.ie](http://www.nwpp.ie)). A revised National Hazardous Waste Management Plan (NHWMP) was issued in 2008 following review, public consultation and SEA ([www.epa.ie](http://www.epa.ie)). This plan places particular emphasis on the prevention, collection and correct management of hazardous waste. Significant NWPP prevention projects include a Green Business programme ([www.greenbusiness.ie](http://www.greenbusiness.ie)), a Green Hospitality Award scheme ([www.gha.ie](http://www.gha.ie)), a Local Authority Prevention Programme ([www.lapd.ie](http://www.lapd.ie)), a Packaging Waste prevention Programme ([www.preventandsave.ie](http://www.preventandsave.ie)) and a Green Home programme ([www.greenhome.ie](http://www.greenhome.ie)). All of these programmes have particular regard to hazardous and biodegradable wastes during waste auditing and characterisation exercises. Specific projects are underway also to implement aspects of the new NHWMP including prevention in the pharmaceutical and health service sectors, collection at civic amenity sites, management of garage and farm HW, producer responsibility and identification of barriers to self-sufficiency in HW treatment. EPA enforce the limits on hazardous substances in packaging, electrical equipment (RoHS), batteries, Deco-paints (solvents) and vehicles (ELV). Implementation of the requirements in relation to PCBs, POPs, ODS and F-gases are also underway.

“Preventing and Recycling Waste: Delivering Change”

The policy statement on the prevention and recycling of waste, Preventing and Recycling Waste: Delivering Change, published in March 2002, addresses in detail the factors and practical considerations that are relevant to the achievement of Government policy objectives for the prevention of waste and for the re-use and recycling of the waste that is produced. The policy statement specifically

- highlights the necessary disciplines that must be imposed within waste management systems to secure real progress on waste prevention, re-use and recovery;

- outlines a range of measures that will be undertaken in the interests of minimising waste generation and ensuring a sustained expansion in re-use and recycling performance;

- identifies issues and possible actions which require further systematic consideration.

### “National Strategy on Biodegradable Waste”

The National Strategy on Biodegradable Waste was published in April 2006 and provides the blueprint to achieve Ireland’s targets for the diversion of biodegradable municipal waste from landfill in accordance with the requirements of Directive 1999/31/EC on the landfill of waste. The Strategy sets out a wide range of integrated measures designed in accordance with the waste hierarchy to support biodegradable waste minimisation and diversion from landfill. Prevention targets have been established to reduce arisings of biodegradable municipal waste that will require subsequent treatment and recovery while ambitious targets for the recycling of waste paper/cardboard and the biological treatment of food and garden wastes have been put in place for both the domestic and commercial sectors over the timeframe of the Strategy. A range of treatment technologies are also proposed to facilitate the diversion of the organic fraction of residual waste from landfill.

### *Legislation*

Waste Management Act 1996, as amended

Responsible: Department of Environment, Heritage & Local Government

Part III of the Waste Management Act 1996 provides for wide-ranging regulatory measure to promote waste prevention and recovery which may involve obligations upon producers, distributors, retailers and consumers. There is a basic obligation on persons involved in industrial, commercial and agricultural activities to have due regard to the need to prevent or minimize the production of waste from that activity and to take reasonable steps for that purpose, including steps relating to product design.

Integrated Pollution Control Licensing (since 1994)

Responsible: Environmental Protection Agency (EPA)

Under the Environmental Protection Agency Act, 1992, the EPA is responsible for Integrated Pollution Control licensing of scheduled activities. These include all major manufacturing activities in the country. Each license contains a specific condition relating to the establishment of an Environmental Management System (EMS). Through the EMS the license must assess all operations and review all practicable options for the use of cleaner technology, cleaner production and the reduction and minimization of the waste at the facility. See Irish EPA Guidelines on the content of an Annual Environmental Report (AER). See also <http://www.epa.ie/downloads/advice/>

Waste Licensing (since 1997)

Responsible: Environmental Protection Agency (EPA)

Under the Waste Management Acts 1996-2008, the EPA is responsible for licensing scheduled waste recovery and disposal activities. Each license requires that the licensee establish an Environmental Management System (EMS). The EMS provides a mechanism for ongoing improvement in environmental performance by the licensee. For instance, transfer stations are required to introduce or extend recycling of wastes handled by the facility. Landfill site operators are required to provide for recycling of wastes such as construction and demolition waste, to assess and introduce, if possible, the utilization of landfill gas, and to introduce methods for the recovery of sewage sludge.

Packaging Regulations (Since 1997)

Responsible: Local authorities & the Environmental Protection Agency

The Waste Management (Packaging) Regulations 2007 consolidate previous regulations made in 2003, 2004 and 2006 (which replaced the original regulations

of 1997 and 1998 respectively) and impose a wide range of obligations on all producers placing packaging on the Irish market (i.e. importers, manufacturers, packer/fillers, distributors and retailers). The regulations are intended to facilitate, inter alia, the achievement by Ireland of the end 2011 recovery and recycling targets for packaging waste as set out in Directive 94/62/EC on packaging and packaging waste as amended by Directive 2004/12/EC. These Regulations provide the necessary legal framework to facilitate the recovery and recycling of packaging waste in Ireland.

Article 28 of the regulations provides that packaging placed on the market in Ireland must comply with the essential requirements of packaging set out in accordance with Annex II of Directive 94/62/EC on packaging and packaging waste while article 29 prescribes restrictions on the aggregate concentration levels of lead, cadmium, mercury and hexavalent chromium in packaging materials and packaging imported or manufactured in Ireland.

#### End-of-Life Vehicle Regulations (Since 2006)

Responsible: Local authorities

The Waste Management (End-of-Life Vehicles) Regulations 2006 are designed to implement the provisions of Directive 2000/53/EC of the European Parliament and of the Council on end-of-life vehicles. In particular, they are intended to facilitate the achievement of specified targets for the reuse/recovery and the reuse/recycling of end-of-life vehicles at authorised treatment facilities which operate to the minimum technical requirements set out in Annex I of Directive 2000/53/EC on end-of-life vehicles.

Part IV of the regulations imposes a range of obligations on vehicle producers to ensure that the materials and components of specified vehicles placed on the market in Ireland do not contain lead, mercury, cadmium or hexavalent chromium other than in cases specifically exempted in accordance with the provisions of Annex II (as amended) of Directive 2000/53/EC on end-of-life vehicles and that technical documentation must be made available on request by producers to verify compliance with these requirements. The Environmental Protection Agency has agreed to act as the competent authority for the enforcement of these provisions of the regulations.

#### Plastic Bag Regulations (Since 2001)

Responsible: Local authorities

The Waste Management (Environmental Levy) (Plastic Bag) Regulations, 2001 to 2007 provide for the imposition of an environmental Levy of 22 cent on plastic bags. The purpose of the levy is to reduce consumption of plastic shopping bags dispensed at retail outlets. Revenues raised from the plastic shopping bag is assigned to the Environment Fund – which also receives funding from the landfill levy. This fund is used for supporting appropriate waste management, litter and other environmental initiatives.

#### Farm Plastics:

Responsible: Local authorities

The Waste Management (Farm Plastics) Regulations 2001, which revised and replaced previous regulations made in 1997, impose a wide range of obligations on

both producers (i.e. manufacturers and importers) and suppliers of farm plastics (i.e. silage bale wrap and sheeting) to require the collection and recovery of such farm plastics placed on the market when entering the waste phase at end-of-life. Producers and suppliers may fulfil their obligations by participating in approved compliance schemes established for the purpose of farm plastics recovery or, alternatively, by operating 'deposit and refund' arrangements in support of the collection and recovery of waste farm plastics.

The Waste Management (Waste Electrical and Electronic Equipment) Regulations, 2005 (WEEE Regulations) (as amended)

Responsible: Environment Protection Agency and Local Authorities

The Regulations are designed to promote the recovery of waste electrical and electronic equipment.

They facilitate in particular the achievement of the targets for the collection, treatment, recovery and disposal of waste electrical and electronic equipment in an environmentally sound manner established by Directive 2002/96/EC on waste electrical and electronic equipment as amended by Directive 2003/108/EC. The Regulations impose obligations on persons who supply electrical and electronic equipment to the Irish market, whether as retailers, importers or manufacturers. An exemption from these obligations is available to persons who participate in a scheme by an approved body for the collection, treatment, recovery and disposal of waste electrical and electronic equipment in an environmentally sound manner operated.

Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) Regulations, 2005 (as amended) (ROHS Regulations)

Responsible: Environment Protection Agency

These Regulations are designed to minimise waste arisings of certain hazardous substances by prohibiting the use of certain heavy metals in electrical and electronic equipment as required by Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment. The Regulations impose obligations on persons who supply electrical and electronic equipment to the Irish market, whether as retailers, importers or manufacturers.

The Waste Management (Batteries and Accumulators) Regulations (S.I. No 268 of 2008). as amended by the Waste Management (Batteries and Accumulators)(Amendment) Regulations 2008 (SI No 556 of 2008)

Responsible: Environment Protection Agency and Local Authorities

These Regulations are designed to minimise waste arisings of certain hazardous substances by prohibiting the use of certain heavy metals in batteries and accumulators and to promote the recovery of waste batteries and accumulators (e.g. rechargeable batteries) as required by European Parliament and Council Directive 2006/66/EC. They facilitate in particular the achievement of the targets for the collection, treatment, recovery and disposal of waste batteries and accumulators in an environmentally sound manner established by European Parliament and Council Directive 2006/66/EC. The Regulations impose obligations on persons who supply electrical and electronic equipment to the Irish market, whether as retailers, importers or manufacturers. An exemption from these obligations is available to persons who participate in a scheme operated by an approved body for the collection, treatment, recovery and disposal of waste batteries in an environmentally sound manner.

## Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects

Responsible: Local authorities

The purpose of the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects is to promote an integrated approach to construction and demolition waste management practice throughout the duration of a project. They are designed to promote sustainable development, environmental protection and the optimum use of resources. The Guidelines introduce the concept of on-site waste management planning for projects above certain thresholds and provide a blueprint for designers, developers, practitioners and competent authorities, for the proper management of construction and demolition wastes.

Detailed guidance is provided on the essential components of a construction and demolition waste management plan including material on tracking, through internal auditing and the submission of summary reports to local authorities. Ultimately, this will assist in improving information on waste flows in the construction industry sector. Under the Development Management Guidelines for Local Authorities (June 2007), planning authorities should have regard to the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects when considering applications for development works above the specified thresholds in order to facilitate the proper management of construction and demolition wastes.

## Tyre Regulations (since 2008)

Responsible: Local authorities

The Waste Management (Tyres and Waste Tyres) Regulations 2007 impose a wide range of obligations on persons who supply tyres to the Irish market, whether as retailers, importers or manufacturers and on persons who manage waste tyres. These regulations are designed to facilitate the maximum reuse, recycling and recovery of waste tyres.

## *Incentives*

### Cleaner Production Pilot Demonstration Programme (June 1997)

Responsible: Environmental Protection Agency (EPA)

This programme, administered on behalf of the Department of the Environment, Heritage and Local Government by the EPA, was established to promote a more environmentally friendly approach to production in the manufacturing and services industries in Ireland.

### Cleaner Greener Production Programme (2007-2013)

Responsible: Environmental Protection Agency (EPA)

The Environmental Protection Agency implemented the Cleaner Greener Production Programme (CGPP) in 2001 under the ERDTI programme which is funded by the National Development Plan (2007-2013). This programme focuses on the prevention and reduction of environmental impact arising from industrial activities.

Since 2001, the EPA has provided almost €6 million (out of a total project cost of €17.5 million) to 75 participants under the Cleaner Greener Production Programme (CGPP). Analysis of the second phase of the programme (2005-2007) showed that based on EPA support of €1 million, the 22 organisations involved achieved cost savings of €1.6 million per annum. These savings were in addition to significant

reductions in environmental impact, including 3,500 tonnes per annum of greenhouse gas emissions, 1,550 tonnes per annum of solid waste arisings and 120,000 m<sup>3</sup> per annum savings in water consumption. In 2007, the CGPP programme was highlighted as an Exemplar Programme in a European Commission review of Eco-Innovation Programmes.

Further details are available on [www.clearerproduction.ie](http://www.clearerproduction.ie).

#### Demonstration Scheme for the Development of Environmentally Superior Products (1999)

Responsible: Enterprise Ireland

A grant-assisted pilot demonstration scheme which was operated by Enterprise Ireland and directed towards indigenous small to medium sized enterprises engaged in manufacturing.

#### Environmentally Superior Products Initiative (1999 – 2008)

Responsible: Enterprise Ireland

Continuing on from the Demonstration scheme for the development of Environmentally Superior Products (ESP), this initiative is aimed at improving the environmental and hence business performance of Irish SME manufacturing industry. It also aims to improve the strategic capability of SME's through the exploitation of the market for ESP's. This can entail waste reduction in product design.

#### European Union Eco-Labeling Scheme

Responsibility: National Standards Authority of Ireland

The objectives of the scheme are to promote the design, production, marketing and use of products which have a reduced environmental impact during their life-cycle; and to provide consumers with better information on the environmental impact of products and to encourage preferential consideration of eco-labelled products in purchasing decisions.

#### Environmental Management System Grant Scheme (1998 –2008)

Responsible: Enterprise Ireland

This grant scheme provides financial assistance to small and medium sized indigenous Irish manufacturing industries to enable them to engage independent consultants to support and train the company's management in the installation and running of an Environmental Management System to either EMAS or ISO 14001. These EMS's would include a waste management component.

#### GreenTech Support (2009)

Responsible: Enterprise Ireland

New grant support integrating above schemes into broader categories including: Carbon Management/Reduction – Aimed at help towards Ireland greenhouse gas commitments. Purpose to provide financial support for Enterprise Ireland clients to engage consultants to help put a carbon management strategy into the organisation. This includes measurement of carbon footprint of organisation or product life cycle and to put in place strategies for reduction. This programme can help in assessing waste generation and how it can be reduced.

Eco-labels – Support for obtaining an EU Eco-label for consumer products. The environmental criteria for Eco-labels usually involves management of waste impacts of products.

Environmental Standards – Continuance of support for EMS (as above), extended to

include other environmental standards.

Environmentally Superior Products – Continuance of above scheme.

#### ISO 14001 Environmental Management Standards

Responsible: National Standards Authority of Ireland (NSAI)

Third party registration of environmental management systems (EMS) provides confidence that environmental issues are being managed in accordance with internationally recognized standards and procedures. ISO 14001 requires organisations to define their environmental policy and review their activities, products, processes and services, in order to identify the environmental issues and associated impacts, which can be controlled. NSAI is accredited to assess and certify organizations to ISO 14001. NSAI offers training workshops that outline the requirements of the standard, the interpretation of those requirements and their application in an EMS.

#### Environmental Research, Technological Development and Innovation Programme (2000-2006)

Responsible: Environmental Protection Agency (EPA)

The Environmental Research Technological Development and Innovation Programme was allocated €32 million by the Irish Government under the National Development Plan 2000-2006. The funding is being invested in the following research areas:

- Environmentally Sustainable Resource Management
- Sustainable Development
- Cleaner Production
- National Environmental Research Centre

□

#### STRIVE Programme 2007-2013

The EPA research programme for the period 2007-2013 is entitled Science, Technology, Research and Innovation for the Environment (STRIVE) and is based on the following:

- the Environmental Research Sub-programmes of the National Development Plan 2007-2013;
- the Government's Strategy for Science, Technology and Innovation launched in 2006;
- the EPA's most recent assessments of Ireland's environment;
- the EPA's strategy 2020 Vision – Protecting and Improving Ireland's Environment;
- a series of workshops organised by the Agency, mainly during 2006, involving environmental policymakers, managers and researchers;
- the experience gained in previous EPA research programmes.

It also takes account of developments at EU level in respect of current environment and research programmes and of the wider international context.

The purpose of the programme is to protect and improve the natural environment by addressing key environmental management issues through the provision of world-class scientific knowledge generated through a vibrant, competitive programme of research developed supported and co-ordinated by EPA.

The STRIVE Programme consists of three key measures, two measures in support of these and seven principal thematic areas. Brief details of these are provided below:

- Key Measures
  - oMeasure 1: Sustainable Development

oMeasure 2: Environmental Technologies and Cleaner Production

oMeasure 3: A Healthy Environment

•Support Measures

oMeasure 4: EPA Environmental Research Centre

oMeasure 5: Capacity and Capability Building

•Principal Thematic areas

oAir Quality, Atmospheric Deposition and Noise

oSectoral impacts on Biodiversity

oClimate Change

oSoils and Landscape

oSocio-Economics

oWaste, Resource Management and Chemicals

oWater Quality and the Aquatic Environment.

The funding for the programme is provided from a number of sources:

•€93 million provided in the Environmental Research Sub-programme of the NDP 2007-2013;

•€8 million provided for research in aspects of climate change, transboundary pollution and earth observation under the Inter Departmental Committee for the Strategy for Science, Technology and Innovation (IDC-SSTI);

•Co-funding with other state agencies and funding groups for projects / themes where such an arrangement would deliver synergies and increase the utilisation of results;

•EPA core funding for staffing the management of the programme.

See more details on STRIVE programme at

<http://www.epa.ie/researchandeducation/research/>

### **Industry**

Individual measures taken by industries and waste generators in accordance with Environmental Management Systems established under IPC and waste licenses issued by the EPA. These measures are overseen by the EPA and are reported to public file in annual environmental reports submitted by IPPC and Waste Facility licence holders. See also CGPP initiatives in answer to Q5(iii) above.

### **Others**

Environmental Awareness Programme

Responsible: Department of the Environment, Heritage and Local Government.

The Race Against Waste Campaign, which was the most extensive waste information campaign ever run in Ireland, took place over the period 2003 – 2007. The campaign, which was launched in October 2003, combined a multi-media national awareness campaign and a supporting communications strategy and aimed to get people acting to reduce, reuse and recycle waste. The campaign directly engaged specific audiences who are creating waste – communities, businesses, large organisations and homes – with the objective of improving environmental behaviour. It provided advice and information directly to the public through a lo-call telephone line and e-mail; ran a programme of action for businesses, including nationwide seminars; and informed the public through on-going public relations and advertising campaigns. The main RAW campaign concluded in October 2006, while some elements will continue in 2007 such as the RAW web site, waste audit tool and distribution of RAW waste information materials.

Information, Advice, Awareness Raising, Guidance & Tools

Responsible: Enterprise Ireland (EI)

EI provides a range of environmental supports designed to improve the environmental performance of indigenous Irish industry, with a particular focus on SMEs, such as:

Information and advice on industry environmental issues including waste provide via phone, email or site visits and site environmental audits and eco-efficiency assessments on waste and other environmental issues.

Online waste information and tools are available on [www.envirocentre.ie](http://www.envirocentre.ie).

Environmental training and awareness on waste prevention/minimization and management through events and Regional Environmental Industrial Fora.

## **Israel**

*Year* 2007

### *Policies*

A policy for waste reduction was adopted. More permits were issued for recycling and reuse of hazardous waste. The Ministry of the Environment encourages reduction, recycling and reuse of hazardous waste.

### *Legislation*

In process.

### *Incentives*

The Ministry of the Environment funded up to 40% of the cost for industry (facilities) that invested in hazardous waste reduction.

### *Industry*

### *Others*

## **Italy**

*Year* 2007

### *Policies*

*Legislation* Legislative Decree No. 152/06, Artt.179,180 and 181; Legislative Decree No 151/2005 (Directives 2002/95/EC, 2002/96/EC, 2003/108/EC).

### *Incentives*

### *Industry*

### *Others*

## **Luxembourg**

*Year* 2007

### *Policies*

National Waste Management Plan adopted by Government on 15th December 2000; and

Obligation for industries and Small and Medium Enterprises (SME) to establish internal waste management plans with the view of reduction and recycling of waste.

*Legislation* Modified Waste Management Law of 17th June 1994.

### *Incentives*

"SuperDrecksKëscht fiir Betriiber" initiative taken since 1992 by the Ministry of Environment and the Chamber of Handicraft with the aims of:  
advising industries and Small and Medium Enterprises (SME) in good ecological practice of internal waste management; and  
giving a quality label to the companies with a good waste management practice.

### *Industry*

Internal waste management according to internal Waste Management Plan and/or waste management practice according to "SuperDrecksKëscht fiir Betriiber" - concept.

### *Others*

None.

## **Malta**

*Year* 2007

### *Policies*

Malta adopted 'A Solid Waste Management Strategy for the Maltese Islands' in

October 2001. This document which was prepared with the assistance of European Commission-appointed consultants, sets out the goals, targets and time frames to be achieved over the coming years in waste handling and the provision of waste treatment facilities. This document is being updated.

A Twinning Light Project MT04EN08TL entitled “Hazardous waste inventory and technical assistance in regulatory aspects of hazardous waste management” was implemented. This project started in November 2006 and spread over 8 months until July 2007. The overall objective of this project was to further strengthen Malta’s capacity to comply with the EU Environmental Acquis in the field of waste management. The purpose of this project was to enhance the ability of the Competent Authority (MEPA) and WasteServ Malta Limited to manage hazardous wastes and provide Malta with the capacity to comply with monitoring and inventorisation obligations pursuant to the relevant EU Directives and Regulations. The project resulted in the following mandatory results, including benchmarks:

- An assessment of the current situation in respect of hazardous waste in Malta, including thorough review of existing legal instruments and recommendations of previous projects;
- Hazardous waste producers, operators and other stakeholders (including households and retailers) informed on relevant obligations in the field of hazardous waste management and on the registration of hazardous waste generation activities;
- A national digital inventory of hazardous waste generated in Malta developed for reporting under the relevant legal instruments;
- A package of legislative, policy and administrative measures introduced to ensure environmentally sustainable management of hazardous waste in Malta; and
- The relevant government officials trained in the inventorisation of hazardous waste and in the use of related data management and monitoring systems.

**Legislation** In view of the fact that Malta does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the waste in question in an environmentally sound and efficient manner (Article 4 Paragraph 9a Basle Convention), the Competent Authority has requested most generators to store their hazardous waste while seeking exportation for recovery or disposal in an environmentally sound manner.

**Incentives** N/A

**Industry** Most generators of waste store their hazardous waste while seeking exportation for recovery or disposal in an environmentally sound manner.

**Others** N/A

**Monaco**

**Year** 2007

**Policies** No measures

**Legislation** No measures

**Incentives** No measures

**Industry** No measures

**Others** No measures

**Netherlands**

**Year** 2007

**Policies** The waste policy plan 2002-2012 dedicates several chapters to the subject of waste

prevention and reduction, which is a first goal of the waste policy in the Netherlands.

The ministry agreed with industry on Integrated Environmental Tasks on waste reduction; there was a program on “Cleaner production”; a project named “industrial successes with waste prevention”; a strategy named “with prevention there is a lot to gain”; and an information campaign under the name “less waste, you have it in your own hand”.

In the waste policy plan 2002-2012 a number of challenges have been indicated, like:

- a further reduction in the growth of the total amount of waste;
- to stimulate separate collection of waste from households and the trade/services/government sector;
- to stimulate recycling of waste;- to stimulate the innovation of waste treatment techniques.

**Legislation**

Decree on landfill ban for specific hazardous and other waste.

**Incentives**

Tax on landfill; decision to increase tax for landfill of household waste and combustible non-hazardous waste; and  
Tax-reduction for companies investing in environmentally friendly technology, specified in an official tax-regulation. Hundreds of machines, systems, or specific additional installations are mentioned.

**Industry**

Specific measures at polluting industries and voluntary agreements with industry to reduce the amount of waste.

**Others**

Governmental support: subsidies on quick scans focused on possibilities to reduce waste, advises to industry; and  
Regulatory instruments: permitting procedures also take waste prevention into account. General rules for small and intermediate sized companies.

**Norway**

**Year**

2007

**Policies**

No specific measures are taken to reduce the amount of hazardous wastes which are generated.

National policies are focused on collection and disposal of hazardous wastes to avoid that hazardous waste are spread in nature or disposed together with non-hazardous waste, thus causing potential pollution.

**Legislation**

The Pollution Control Act, and the regulation on waste, chap 11, are the two main legislation documents on hazardous waste.

Several other chapters in the regulation on waste concern specific types of waste which may contain hazardous substances or represent a risk for human health or the environment, e.g. batteries, PCBs, CFCs. The chapter establishing producer responsibility for WEEE has been revised and strengthens to reduce numbers of free riders and give authorities better possibilities for compliance control.

The product regulation sets restrictions on the manufacture, import, export, sale and use of hazardous chemicals and products (PCBs, heavy metals etc). In the longer term, it will contribute to reduce the generation of hazardous waste, even if, in the short run, the amount of hazardous waste may increase.

The pollution regulation also contains terms which may influence the generation and

disposal of hazardous waste (amalgam, photographic chemicals etc).

Unofficial translations of these regulations may be found at  
[http://www.sft.no/seksjonsartikkel\\_\\_\\_\\_30215.aspx](http://www.sft.no/seksjonsartikkel____30215.aspx) and  
[http://www.sft.no/seksjonsartikkel\\_\\_\\_\\_30217.aspx](http://www.sft.no/seksjonsartikkel____30217.aspx)

**Incentives** Taxes or deposits are imposed on products that will generate hazardous waste, such as lubrication oil, trichloroethylene, and perchloroethene.

Refunds are provided when some types of hazardous waste as used lube oils and trichloroethylene, are delivered to approved facilities

**Industry** The industrial batteries importers have developed a return scheme for used lead accumulators, and the windows producers and importers have developed a return scheme for discarded insulated windows containing PCBs. Both are compulsory.

The implementation of the WEEE-directive in the Norwegian waste regulation settles that producers shall establish a return scheme for WEEE.

**Others** The hazardous waste regulation demands registration (declaration) of all hazardous waste when delivered by enterprises to firms authorized for handling such waste.

## **Portugal**

**Year** 2007

**Policies** According to article 13 of the national framework law on waste management, Decree-Law No 178/2006, of 5 September 2006, the implementation of the “National Plan on Waste Management” should be supported by sector-based plans. In this context, the following plans have been prepared, approved and has been implemented:

-Strategic Plan on Municipal Solid Waste, concerning the period 2007 – 2016, approved by the Government and published in February 2007 (Portaria n.º 187/2007);

-Strategic Plan on Industrial Waste, concerning the period 2000-2020, published in December 1999; its revision was published in April 2002;

-National Plan on Industrial Waste Prevention, approved in September 2000, concerning the period 2000 – 2015.

All the Strategic Plans referred above set the principle of environmental sound management of waste and take the hierarchy of waste management priorities into account, aiming at the prevention, recycling, recovery and safe disposal of waste. The plans put a strong emphasis on waste minimization and on information and education campaigns.

The revised Strategic Plan on Industrial Waste stresses, namely, the inventory of wastes and the most appropriate treatment for each industrial waste, from the environment and public health point of view. It also focuses on the consolidation of the prevention strategy as approved in National Plan on Industrial Waste Prevention; including the objective of Portuguese self-sufficiency in managing hazardous waste through the construction of integrated recovery and disposal centres [CIRVER) and co-incineration in cement kilns.

**Legislation** The Waste Act (Decree-Law No 178/2006 of 5 September 2006) introduces the general obligation to prevent waste generation and to reduce its quantity and hazard potential. There is also specific legislation regarding the environmental sound management of special waste flows.

In order to accomplish the rules that were established in the national framework and

specific laws on waste management, the producer responsibility principle is being implemented by the creation of integrated management systems for special waste flows, ensuring the proper intervention of the stakeholders which are involved during the life cycle of the product.

**Incentives**

- Waste management levy;
- The European Union Funds, such as LIFE program.

**Industry**

- Voluntary agreement with several industry sectors on environmental improvement, namely on waste management;
- Constitution of entities responsible for the integrated management of special waste flows, as indicated in 5(ii);
- Several enterprises adopted their own management systems, in accordance with ISO 14001 and the European Community Eco-Management and Audit Scheme (EMAS) and Ecolabel.

**Others**

**Spain**

**Year**

2007

**Policies**

The national strategy on municipal wastes in Spain is set on the National Plan on Municipal Wastes (2000-2006), published in the Official Gazette of 2 February 2000.

Its objectives are, inter alia:

- to maintain in the year 2002, the quantity of municipal wastes generated, at the 1996 level, thereby reducing by 6 per cent the quantity of waste per inhabitant per year;
- to reduce, prior to 30 June 2001, by 10 per cent, the annual generation of packaging wastes in relation to the quantity generated in 1996;
- to ensure other levels of reuse, recycling and recovery for specific wastes selectively collected (glass, paper/carton, packaging of various origins, etc.) set out in the Plan;
- to eliminate the uncontrolled spillage of wastes by the end of 2006 and in the same year, eliminate in controlled landfill sites 33 per cent of the municipal wastes generated, and in landfill sites which comply with directive 1999/31/EC of the European Community; and
- to build "bring points" for the selective collection of domestic hazardous wastes (paint, solvents, oils, etc.).

The Plan foresees a total investment of 3.000 million Euros.

In addition to the National Plan on Municipal Wastes, several plans on specific waste streams have been issued through 2001, namely:

- used tires (Official Gazette of 30/10/2001);
- end of life vehicles (16/10/2001);
- construction and demolition wastes (12/07/2001); and
- sludge from sewage treatment plants (12/07/2001).

The National Integrated Waste Plan (PNIR) 2008-2015, approved 26/12/2008.

The document gathers, in an integrated manner, specific chapters for:

- Municipal wastes
- Hazardous wastes
- End of life vehicles
- End of life tires
- Sewage sludge
- Construction and demolition wastes
- PCB/PCT and PCB/PCT containing equipment

- Wastes from accumulators and batteries
- Electric and electronic equipment wastes
- Wastes from extractive industries (mining activities)
- Wastes from agricultural plastics
- Non hazardous industrial wastes
- Contaminated soils

The text (in Spanish) can be accessed through the web site of the Ministry of Environment of Spain:

[http://www.mma.es/portal/secciones/calidad\\_contaminacion/pnir.htm](http://www.mma.es/portal/secciones/calidad_contaminacion/pnir.htm)

### **Legislation**

(Note: most part of applicable spanish legislation, wether EU legislation, national or regional legislation, can be accessed or downloaded through the webpage of the Ministry of Environment of Spain: [www.mma.es](http://www.mma.es))

Act 10/98 on Wastes is aimed, inter alia, at preventing the production of wastes and encouraging, in this order, its minimization, reuse, recycling and other forms of recovery, with the view to protecting the environment and human health. To that end, the Government will be able to establish norms for the various types of wastes, including specific provisions on the production and management of wastes.

Industries and activities generating hazardous wastes are subject to administrative authorization. The permit must determine the maximum quantity per unit of production as well as the characteristics of the wastes which can be generated, on the basis of certain criteria, including, the use of less contaminating technologies under economic and technically viable conditions, as well as technical characteristics of the installation in question. When applying the criteria for deciding on the less contaminating technologies, priority will be given to the principle of prevention of wastes. To that end, the Act foresees the use of various instruments as voluntary agreements on the management of wastes by those responsible for launching on the market products which after use become waste. Voluntary agreements should be approved or authorized by the relevant competent authorities, which in some cases may themselves participate in the agreements. The Act expressly requires that any potentially recyclable or recoverable waste should be destined for that purpose and its elimination avoided as far as possible (in the case of hazardous wastes, this requirement will be applicable from 1 January 2000).

The regional authorities of the Spanish State should have to draw up regional plans on waste. The national government, by integrating these regional plans, should draw up national plans on waste which should establish the goals relating to reduction, reuse, recycling, other forms of recover and elimination, the measures to adopt in order to attain these goals, the financial means and the procedure for reviewing the plans.

Act 11/97 on packaging and packaging wastes lays down goals for reducing the generation of packaging and recovering those produced, as well as requirements for reducing the content of certain hazardous substances in the packages (lead, cadmium, mercury and hexavalent chromium).

Royal Decree 782/1998, which develops and implements the above mentioned Act 11/97 on packaging and packaging wastes requires packaging industries to prepare triennial forecasts indicating the goals for reducing the generation of packaging waste and their content of hazardous substances.

The attainment of previous goals will be ensured through voluntary sectoral agreements (between packers, dealers in packaging products, those involved in recycling activities, etc.) reached by establishing integrated management systems for packaging wastes and used packages.

Royal Decree 1378/1999 provides for measures for eliminating and managing PCB/PCTs as well as apparatus containing them. It sets the year 2010 as the deadline for the gradual elimination of PCBs, either directly, including apparatus that contain them, or indirectly through decontamination.

Further rules are being prepared including sectoral agreements on other specific wastes streams such as out-of-use vehicles or used batteries and accumulators, which incorporate measures on the minimization of the generation of hazardous wastes.

In 27th December the 2001, Decree 1481/2001 regulating the landfilling of wastes has been passed in Spain (it is the transposition of directive 1999/31/EEC) The costs supported today by users of landfills are, in general terms, far from reflecting the real cost of final disposal of wastes through landfilling, which in fact means a transfer of environmental costs to the society as a whole and to future generations. The new regulation will mean that the price the user of a landfill will pay for the elimination of his wastes will be the real price, including the cost of controlling the landfill for a minimum period of 30 years after it has been closed. This measure will apply to all new landfills and gradually (before the year 2009) to all existing ones. The rise in the cost of the landfilling of wastes will have a positive effect on more appropriate alternative methods of waste management from an environmental point of view (reuse, recycling, energy recovery), as well as on the prevention of the generation of wastes.

There are also other regulations which apply to specific waste flows and/or waste treatments, i.e.:

- Management of Used Industrial Oils: Royal Decree 679/2006 (Official Gazette num 132 of 03/06/06);
- Used Batteries and Accumulators: Royal Decree 106/2008 (Official Gazette num. 37 of 12/02/2008);
- Construction and Demolition Wastes: Royal Decree 105/2008 (Official Gazette num. 38 of 13/02/2008);
- Management of End of Life Vehicles: Royal Decree 1383/2002 (Official Gazette num. 3 of 03/01/2003) Transposition into Spanish legislation of EU Directive 2000/53/CE on End of Life Vehicles;
- Incineration of Wastes: Royal Decree 653/2003 (Official Gazette num. 142 of 14/06/2003 and num. 224 of 18/09/2003).
- Electrical and Electronic Equipment and the Management of their Wastes: Royal Decree 208/2005 (Official Gazette num. 49 of 26/02/2005 and num. 76 of 30/03/2005). Transposition of EU Directive 2002/96/CE on Wastes from Electrical and Electronic Equipment;
- Management of Used Tires: Royal Decree 1619/2006 (Official Gazette num 2 of 03/01/06); and
- Contaminated soils: Royal Decree 9/2005 (Official Gazette num 15 of 18/01/2005).

Royal Decree 679/2006, of 2 June 2006, on the management of used industrial oils (Official Gazette of 3 June 2006), requires that industrial oil producers shall adopt, before June 2010, plans for the prevention of used industrial oils, including:

- measures to get longer service life for oils
- better characteristics of oils, which will promote used oil regeneration, recycling and recovery

When purchasing a new oil, the invoice given to the customer should separately quote the cost of the management of the used oil.

For the management of waste oils Royal Decree 679/2006 applies the extended producer responsibility principle. According to respective market share, oil producers should guaranty that the following targets are met:

- 1st July 2006: recovery of 100% of used oils
- 1st January 2007: regeneration of 55% of used oils
- 1st January 2008: regeneration of 65% of used oils

The Royal Decree establishes that, in Spain, used industrial oils should priority be sent to regeneration. The order of preference for used industrial oils treatment is: regeneration, other forms of recycling and energy recovery.

Producer responsibilities (prevention plans, used oils management) can be fulfilled individually or through collective non-profit Producer Responsibility Organizations authorised by competent authorities (regional governments in Spain).

Royal Decree 1619/2005, of 30 December 2005, on the management of end of life tires (Official Gazette of 3 January 2006), requires producers of new tires to prepare, before July 2007, plans for the prevention of end of life tires, including:

- measures to get longer service life for tires
- measures to promote used tires reuse, recycling and recovery

When purchasing a new tire, the invoice given to the customer should separately quote the cost of the management of the end of life tire.

For the management of waste tires, Royal Decree 1619/2005 applies the extended producer responsibility principle. According to respective market share, producers should guarantee that targets established in the End of Life Tires National Plan in force are met. By 16 July 2006, a complete ban on the landfilling in Spain of end of life tires should be applied

Producer responsibilities (prevention plans, end of life tire management) can be fulfilled individually or through collective non-profit Producer Responsibility Organizations authorised by competent authorities (regional governments in Spain).

### ***Incentives***

Besides the above mentioned legal or planning instruments, there are other specific economic instruments or initiatives already in place, as:

- deduction in taxes for companies, by 10%, of their investments in environmental assets (in place since 2001);
- landfill taxes in some regions (i.e. Madrid, Cataluña, Murcia, Andalucía) for non hazardous and hazardous wastes;
- voluntary agreements with stakeholders; and
- promotion of Environmental Management Systems and Schemes (ISO-14000 /EMAS).

Every year the State grants subsidies for the environmentally sound collection and management of used industrial oils, on a quantity which typically averages 6 million Euros. These subsidies will be ending in 2007 with the Producer responsibility instrument put in place through Royal Decree 679/2006 on the management of used industrial oils.

**Industry** Voluntary sectoral agreements on the management of wastes (mentioned above); and Certification of Environmental Management Systems.

As of 2005, 528 organizations -668 installations- are registered under the EU Environmental Management Audit System (EMAS). 199 of these organizations belong to the industrial sector. 329 to non industrial sectors.

**Others**

**Sweden**

**Year** 2007

**Policies** EU Waste management strategy:  
Prevention of generation of waste;  
Reduce content of hazardous material in the waste;  
Reuse or recovery of material or energy; and  
Safe and adequate disposal of the waste.

**Legislation** Producer responsibility of different kinds of waste;  
Ban on landfill of sorted combustible waste from 1 January 2002;  
Ban on landfill of organic waste from 1 January 2005; and  
Ordinance on wastes sent to landfills.

**Incentives** Tax on waste sent to landfill from 1 January 2000.  
Tax on household waste to incineration from 1 July 2006

**Industry**

**Others**

**Turkey**

**Year** 2007

**Policies** Minimization of the waste production at the source;  
The recovery and reuse of waste is the principle of our national regulation if recovery and reuse of wastes are impossible as technical and financial prospective. The wastes shall be eliminated without causing and damage to the environment and human health. Elimination systems must be selected based on the waste characteristics and the corresponding technologies; and  
Establishment of sufficient elimination facilities, and control of such facilities in an environmentally sound manner.

**Legislation** Communiqué on the Rules for the Incineration of Wastes as Alternative or Additive Fuels in Cement Rotary Kilns;  
By-law on the Control of Hazardous Wastes (published on 14 march 2005);  
By-law on the Control of Clinical Wastes (published on 22 July 2005);  
By-law on the Control of Solid Wastes (published on 14 March 1991);  
By-law on the Control of used batteries and accumulators (published on 31 August 2004);  
By-law on control of waste oils (published on 21 January 2004);amendment 30.07.2008  
By-law on control of package and packaging waste (published on 30 July of 2004);  
By-law on control of edible waste oils (published on 19 April 2004); and  
By-law on control of demolition waste (published on 18 March 2004).

By Law on Control of The Tyres which have completed their life-cycles (published on 18 November 2006).

By Law on restriction of the use of certain Hazardous substances in electrical and electronic equipment 30.05.2008

By Law on General Principles of Waste 05.07.2008

### ***Incentives***

#### ***Industry***

The waste generators shall be liable to adopt the necessary measures for the minimization of waste production and to ensure waste management in a manner so that the harmful effects of wastes on the environment and the human health shall be minimized in accordance with the provisions of national regulation.

Also waste generators have responsibility on filling the waste declaration forms annually and forwarding it to Ministry of Environment and Forestry using the waste description code issued by the Ministry.

Responsible care is being implemented among the industrialists. There has been also Environmental Voluntary Declaration applied by the Ministry of Environment and Forestry to some industries. Also, efforts are made by the industries/waste generators through recycling/recovery to reduce the generation of hazardous wastes.

#### ***Others***

In order to enhance the recovery of waste pilot projects have been initiated in İstanbul, Kocaeli and Bursa provinces by the coordination of the Ministry under the umbrella of Turkish Union of Stock Markets and Chambers Commerce and Industry regarding the waste stock exchange.

### **United Kingdom of Great**

#### **Britain and Northern**

#### **Ireland**

***Year*** 2007

#### ***Policies***

Since the waste strategy in 2000, (which was revised in May 2007), England has made significant progress. 2007/08 saw a 10% increase in waste being recycled or composted, from 8 million tonnes in 2006/07, to 8.7 million tonnes in 2007/08.

Hazardous Waste Regulations were implemented on 16 July 2005 to more fully transpose the EC's Hazardous Waste Directive (91/689/EEC). They replace the Special Waste Regulations 1996 and set out requirements for the controlled management of movements of waste that may be considered harmful to human health or the environment.

England: England is making good progress towards meeting its share of European Union landfill directive targets and there continues to be a decrease in waste going to landfill, from 57.9% in 2006/07 to 54.4% in 2007/08 with English Local Authorities land filling 10.6 million tonnes of BMW in 2007/08 - 0.6m tonnes less than England's 2010 target of 11.2 million tones. This is a reduction of 8.4% on 2006/07 levels. This progress has been driven by significant changes in policy. The landfill tax escalator and the introduction of the Landfill Allowance Trading Scheme (LATS) have created sharp incentives to divert waste from landfill. Additional funding for local authorities, including through the private finance initiative, has led to a major increase in kerbside recycling facilities and new waste treatment facilities. European directives are targeting sectors, including vehicles, electrical and electronic equipment and packaging. New delivery arrangements have helped to drive the strategy, including the Waste Implementation Programme (WIP), the Waste and Resources Action Programme (WRAP) and the Business Resource Efficiency and Waste (BREW) Programme.

Scotland: Scotland is the first part of the UK to adopt a “Household Waste Prevention Action Plan”. This can be found at [www.scotland.gov.uk](http://www.scotland.gov.uk). The Scottish Government also supports Envirowise Scotland, which provides advice to business on waste prevention: [www.envirowise.gov.uk/scotland](http://www.envirowise.gov.uk/scotland). The Scottish Government has adopted the philosophy of Zero Waste, with ambitious waste prevention and recycling targets (recycling and composting a minimum of 50 per cent of municipal waste by 2013, a minimum of 60 per cent by 2020, and 70 per cent by 2025) and is currently preparing a new National Waste Management Plan for Scotland.

Wales: The Welsh Assembly Government published its National Waste Strategy “Wise about Waste” in June 2002 which can be viewed at [www.wales.gov.uk](http://www.wales.gov.uk). The emphasis is on waste minimisation and re-use of materials, and includes targets to: achieve combined recycling and composting of municipal waste of 15% in 2003-04, 25% in 2006-07, and 40% in 2009-10 (with only compost derived from source segregated materials counting); reduce the landfill of industrial and commercial waste to less than 85% of 1998 levels by 2005, and less than 80% of 1998 levels by 2010; reduce; reduce hazardous waste by 2010 by at least 20% compared with 2000. The Welsh Assembly Government has so far allocated more than £200 million in additional resources to improve waste management in Wales for the period 2001/02 to 2008/09. Under the Materials Action Programme (MAP) the Assembly Government is providing £8 million per annum over the next three years to help businesses reduce and recycle more of their wastes.

Northern Ireland: “The Northern Ireland Waste Management Strategy 2006-2020” available at [www.doeni.gov.uk](http://www.doeni.gov.uk), covers all waste streams and reflects a change of focus away from simply managing waste to preventing waste. The aim is to stabilise waste generation through government procurement policies, site waste management plans, National Education and Awareness Campaigns, and waste prevention tools developed through a Waste Prevention Forum. The next priority in the Strategy is to increase the amount of waste recycled and recovered. Non-statutory targets have been set to: recycle and compost 35% of Household waste by 2010, 40% by 2015 and 45% by 2020. The Strategy also sets targets for the recycling of 60% of Commercial and Industrial waste by 2020.

### ***Legislation***

The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (as amended) implemented part of the EC Directive on Packaging and Packaging Waste 94/62/EC, in particular the recovery and recycling targets. These required that, by 2001, between 50% and 65% recovery and between 25% and 45% recycling of packaging waste had to be achieved and within this, a minimum of 15% of each material was to be recycled;

- A revised Packaging Directive 2004/12/EC came into force in February 2004 and set new recovery and recycling targets to be met by 31 December 2008.

- The Producer Responsibility Obligations (Packaging Waste) Regulations 2007 were amended in March 2008 to revise existing UK recovery and recycling targets to ensure that the UK achieved the EU targets by 31 December 2008.

- The GB Regulations, and parallel legislation in Northern Ireland, place obligations on certain businesses who place packaging on the market including, in particular, a requirement to carry out target levels of packaging waste recovery and recycling each year.

- The Packaging Waste Recovery Note (PRN) is an evidence note used by obligated businesses to demonstrate compliance with their recovery and recycling obligations. There is also a Packaging Waste Export Recovery Note (PERN) which is issued in respect of tonnages of packaging waste exported for recycling overseas (within and outside the EC). Only preprocessors and exporters who have been accredited by the relevant Agency (Environment Agency in England and Wales or Scottish Environment Protection Agency in Scotland and Environment and Heritage Service in Northern Ireland) may issue PRNs or PERNs respectively;

- The Packaging (Essential Requirements) Regulations 1998 took full effect in January 1999 and were superseded by revised Regulations in 2003. They implement the Directive provisions specifying the essential requirements for packaging placed on the market, which cover minimisation, avoidance of noxious and hazardous substances and the need for packaging to be recoverable (through at least one of the following: material recycling, incineration with energy recovery, composting or biodegradation);

- The Waste Electrical and Electronic Equipment Regulations 2006 require that producers of electrical and electronic equipment finance its collection treatment at appropriately permitted facilities and recycling to target levels when it becomes waste.

- The Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2006 came into force on 1 July 2006.

The Regulations ban the placing on the market of new electrical and electronic equipment containing more than agreed levels of six hazardous substances.

- The End-of-Life Vehicles Regulations 2003 and ELV (Producer Responsibility) Regulations 2005 together implement the requirements of the EU End of Life Vehicles Directive, which from 1 January 2007, requires vehicle manufacturers to finance the take back, treatment and recycling of waste vehicles.

- On 1 August 2000, the Pollution, Prevention and Control (PPC) Regulations entered into force in England and Wales implementing the EU Integrated Pollution, Prevention and Control Directive (96/61/EC). This progressively replaced the Integrated Pollution Control (IPC) regulatory regime in a process which is now virtually complete, applicable to the most potentially polluting industrial processes, which require the Separate Regulations have been made to apply the IPPC Directive to Scotland, Northern Ireland and the offshore oil and gas industries. About 4,300 installations are covered by IPPC, which requires each to have an operating permit based on the use of BAT (best available techniques) and incorporating conditions to protect the environment and human health. In April 2008 a new Environmental Permitting system will be introduced in England and Wales. This all encompassing system will incorporate and supersede the PPC permitting and waste management licensing regimes (see The Environmental Permitting (England and Wales) Regulations 2007).

- The technical and regulatory aspects of Council Directive 99/31/EC on the Landfill of Waste were implemented in England and Wales by the Landfill (England and Wales) Regulations 2002 (as amended) and re-transposed by the Environmental Permitting (England and Wales) Regulations 2007. The terms of the Landfill

Directives require a major change in the way the UK manages its wastes. For example, the Landfill Directive bans specific types of waste from landfill, such as liquid waste, tyres, infectious clinical wastes and certain hazardous wastes. It also bans the co-disposal of hazardous and non-hazardous waste and places strict controls on landfill sites, particularly those for hazardous waste. The Landfill Directive also requires the treatment of waste before disposal to landfill and the introduction of waste acceptance criteria have had a strong influence on the treatment options, particularly for hazardous wastes. One likely effect of the implementation of the Landfill Directive is the increase in the cost of landfill disposal of hazardous waste, providing an incentive for waste producers to reduce the amount of hazardous waste generated.

Articles 5 (1) and (2) of Council Directive 1999/31/EC on the landfill of waste require national strategies for the reduction of biodegradable waste and set targets to reduce the amount of biodegradable municipal waste going to landfill. These aspects of the Directive were implemented in the UK by the Waste and Emissions Trading Act 2003. The Landfill Allowances Trading Scheme (LATS) was introduced in 2005 to help local authorities in England to reduce the amount of biodegradable municipal waste sent to landfill through the use of tradable allowances.

The Scheme is a tool to enable local authorities in England to reduce the amount of biodegradable municipal waste sent to landfill in the most cost effective way, whilst reassuring Government that necessary progress towards the national targets is being made. The Scheme offers an alternative to a regulatory system of inflexible targets by allowing authorities the opportunity to tailor the required reductions to their specific strategy through the flexibilities of banking, borrowing and trading.

#### *Incentives*

The Landfill Tax was introduced in October 1996 as the first UK tax with an explicit environmental objective. It was designed to promote the 'polluter-pays' principle by increasing the price of landfill to better reflect its environmental cost, and to promote a more sustainable approach to waste management. Landfill Tax for active waste is £24 per tonne in 2007 – 08. The 2007 Budget announced that the rate of tax will increase by £8 per tonne each year until at least 2010-11, by which time it will be £48 per tonne-twice the current rate. The rate of tax for inactive waste will also increase to £2.50 per tonne (from its current rate of £2.00 per tonne).

#### *Industry*

Envirowise: Envirowise is a Government funded programme which offers UK businesses, free, confidential, and practical advice on how to minimise waste, increase resource efficiency, reduce environmental impact and save money (converting turnover to profit). Since 1994 Envirowise has helped UK industry save more than £1 billion by reducing waste early in their business processes. Envirowise provides advice on managing unavoidable waste and how to engage with suppliers to drive improved performance through the supply chain. The programme is available to any UK business, completely free of charge but also targets specific sectors such as chemicals and pharmaceuticals, retail and commerce, construction, electronics, engineering, food and drink, furniture, hospitality and catering and printing..

Envirowise offers a range of services, tools and products (behaviour change tool, indicator tool organic waste guide, publications wizard), aimed at helping businesses in the UK address their waste minimisation issues including the environment and energy helpline, podcasts, access to webinars, raising awareness events, and publications (case studies, best practice guides, factsheets and datasheets) written by experts which provide up-to-date information on waste

management and guidance on how to meet the requirements of national and European regulations such as RoHS, WEEE, and the Packaging Waste Regulations as well as how to go beyond compliance whilst also achieving cost savings. [www.envirowise.gov.uk](http://www.envirowise.gov.uk).

The Envirowise programme involves a number of cross-sector projects including a joint partnership initiative with WRAP (the Waste Resources Action Programme) to support businesses in the construction and retail sectors as well as to promote resource efficiency, especially in the hazardous waste sector. Envirowise advocates the implementation of best practice measures (with associated reductions in waste and pollution).

Envirowise contributed to HAZRED between December 2004 and November 2007. HAZRED aimed to help SMEs in six key industry sectors prevent and reduce their production of hazardous waste and identify where they could make financial savings by setting waste reduction targets and developing waste reduction plans to demonstrate the benefits of a sector led approach.

### *Others*

Waste is a mix of very different products and materials. So the UK has targeted action on where we can achieve the greatest improvement in environmental and economic outcomes. We have identified key waste materials where diversion from landfill could realise significant further environmental benefits. The Government is taking action on paper, food, glass, aluminum, wood, plastic and textiles.

Imposing legal restrictions on the types of waste that can be landfilled has encouraged higher rates of recycling and recovery in other EU member states. Subject to further analysis, the UK intends to consult on whether the introduction of further restrictions on the land filling of biodegradable wastes or recyclable materials would make an effective contribution to meeting the objectives set out in the Waste Strategy.

The Waste and Resources Action Programme (WRAP) is a major UK programme established to promote resource efficiency. WRAP works in partnership, to encourage and enable businesses and consumers to be more efficient in their use of materials, and to recycle more things more often. This helps to divert waste from landfill, reduce carbon emissions and improve the environment. WRAP, a not-for-profit UK company, is funded by Defra and the devolved governments.

WRAP runs seven main programmes, addressing waste reduction and recycling issues across the construction, manufacturing and retail sectors; working on organic waste derived compost; promoting the growth recycling businesses; supporting local authorities; and promoting behavioural change.

As a result of WRAP's interventions:

- £182 million has been invested in the recycling sector from commercial sources; The annual turnover for the recycling sector is now £1.3 billion – nearly double its value when WRAP was founded;
- 64% of people in England now describe themselves as committed recyclers, compared to less than half in 2004.
- Over 86 million tones of recycling will be diverted from disposal over the lifetime of WRAP projects already commissioned, saving over 12 million tones of CO2 equivalent.

WRAP has secured signatures from 12 leading grocery retailers and fifteen leading brands and suppliers to the Courtauld Commitment, expressing their commitment to working with WRAP to achieve WRAP's waste minimization objectives as follows:

- to design out packaging waste growth by 2008;
- to deliver absolute reductions in packaging waste by 2010; and
- to identify ways to tackle the problem of food waste.

The Courtauld Commitment is backed by an Innovation Fund which leverages research and development by retailers and their supply chains to develop, test and trial innovative packaging to reduce consumer products packaging and food waste in the home.

WRAP has supplied over 1 million home composting bins to householders across England and they are backing this up with a composting support service. During 2007/08, WRAP launched a consumer-facing 'Love Food Hate Waste' campaign to encourage behavioral change. They are working with the UK grocery sector, food industry, Government and organisations such as the Food Standards Agency, to develop practical solutions and improved communications to make it easier for consumers to get the most from the food they buy, and to waste less of it.

WRAP's aim is to reduce the 6.7 million tonnes of consumer food waste produced each year in the UK by 100,000 tonnes by March 2008.

Waste infrastructure

Defra's Waste Infrastructure Delivery Programme (WIDP) was established to support local authorities to accelerate investment in the large-scale infrastructure required to treat residual waste, without compromising efforts to minimise waste and increase recycling levels. WIDP works to ensure cost-effective and timely delivery of the major infrastructure required to bridge the shortfall in residual waste treatment capacity needed in order for England to meet its share of the UK's Landfill Directive diversion targets.

WIDP brings together the resources and roles of Defra, Partnerships UK ([www.partnershipsuk.org.uk](http://www.partnershipsuk.org.uk)) and 4ps ([www.4ps.gov.uk](http://www.4ps.gov.uk)) in support of Authorities undertaking waste projects.

WIDP provides Local Authorities with high quality comprehensive support: To date £2.02 billion Private Finance Initiative (PFI) credits have been committed to 33 projects, 10 of which have been successfully approved in 2008. There are an additional 11 projects in the application process, for which it is expected a further £1.18 billion PFI credits will be awarded.

WIDP provides practical support to local authorities through skills development to complement existing information sources through 14 Transactors (9 full time equivalents) available to allocate to Authorities irrespective as to whether they are applying for PFI funding. Transactors are drawn from Partnerships UK, 4ps and Defra and are able to offer advice on the procurement of major waste infrastructure.

Currently 35 authorities are receiving support from WIDP transactors, 27 PFI and 8 non-PFI. In addition, 8 authorities have received transactor support in the past.

WIDP have also produced generic guidance documents to help all waste infrastructure projects. So far WIDP has produced 7 modules for the procurement

pack: Planning, Options appraisal, Project governance, Prudential borrowing, Output specification, Payment mechanism and Joint Working. Other modules are under development for publication within the next year.

For more information:

<http://www.defra.gov.uk/environment/waste/wip/widp/index.htm>

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**UN Region: Central and Eastern Europe**

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**Albania**

**Year** 2007

**Policies**

- The National Environmental Action Plan was approved since 2001;
  - Solid Waste Management Plan;
  - The approval in July 2001 of the "Strategic Action Plan for healthcare waste management in Tirana city". This document is prepared from ECAT-Tirana (Environmental Center for Administration and Technology), and it is approved from Minister of Health.
  - National Action Plan on abolition from use and elimination of Persistent Organic Pollutants (POPs), December 2006
- A few municipalities have prepared the Local Plans on Waste Management.

Albania is working to prepare the National Strategy on Waste Management, and local plans, as well as New National Waste Management Plan. During the year 2005 was prepared the draft-National Strategy on Hazardous Waste Management They may be approved soon.

**Legislation**

- Environmental Protection Law No. 7664 1/21/1993;
- Law No.8934 date 05/09/2002 "On Environmental Protection"
- Law No. 9010 date 13/02/2003 "On environmental management of solid waste";
- Law No.8990 date 23/01/03 "On environmental impact assessment";
- Decision of Council of Ministers No 26 1/31/1994 on Hazardous Waste and Residues;
- Decision No. 541 of Council of Ministers dated 25 September 1995 "On Duties that Ministers, Institutions and Physical and Juridical Persons have in Environmental Monitoring and Control Process";
- Law no.9108, date 17/07/2003 "On the Chemical Substances and their compounds"
- Decision of Council of Ministers No 825 date 11.12.2003 "On classification, packaging, labeling and storage of hazardous chemicals".
- Law No 9537 date 18.5.2006 "On Hazardous Waste Management,

The Albanian Waste Catalogue was prepared in 2004 according the European Waste Catalogue and was approved from Council of Ministers on 18/2/2005. The list define the hazardous waste with \* and it has annexes which define hazardous characteristics and hazardous components( in compliance with Council Directive 91/689/EEC on hazardous waste).

**Incentives**

According the Law no.9010 date 13/02/2003 "On environmental management of solid waste", the activities that recycle waste, will be excluded from the tariff of Environmental Permit, and will be supported from MoE. According to the Law No 9537 date 18.5.2006 "On Hazardous Waste Management" Article 7/3b "every producer, pay the expenditures for transport, reclamation and

elimination of generated hazardous waste".

### **Industry**

- 1- The several projects financed from EU started in 2004 for remediation of environmental hot-spots, which was defined from UNEP Report in 2001 in Albania.
- 2- According to the Law no.8990 date 23/01/03 "On environmental impact assessment", the activities and industries should apply for Environmental Permit before they start work, and they have obligation to prepare a plan-measures for management and limit waste generation (which should be present in Environmental Impact Assessment Report).
- 3- According the Law no.9010 date 13/02/2003 "On environmental management of solid waste",-article 10- the activities that generate waste should ensure separate collection of hazardous waste and temporary storage them in special conditions until their final disposal.
- 4-There are a few enterprises which are collecting and recycling paper and plastic.
- 5- There are a number of small enterprises that recover the used tyres.
- 6- According to the Law No 9537 date 18.5.2006 "On Hazardous Waste Management" Article 7/3a "every producer within 12 months from entry into force of national plan for hazardous waste management and in compliance with it, compile and implement a written program on reduction of volume of amount and toxicity of hazardous waste".

### **Others**

1. There is a project financed from CARDS 2002 "Design and construction of a landfill for hazardous waste in Albania". The project started in August 2004.
2. Another project finished the feasibility study for management of hazardous waste and construction of a landfill for waste generated from Oil Refinery in Ballsh.
3. Project "Management of solid waste in Albania with pilot zone Korca region", financed from Swedish International Development Agency – Sida, and was approved from Council of Minister in 22.12.2004. The project aim to support the MoE to fulfill the legislation for waste, as well as the establishment of national waste database and to support the Korca region on waste management (on separate collection, recycling, composting center, remediation of old dumpsites ect.).
4. Project "Management of solid waste in southeastern Albania", financed by kfw. The Project aim to establish an environmental and sustainable modern system for waste management in Korça region. This project is finalized during the year 2005.
5. During the year 2006 in Vlora region is finalized the project « Urban waste management », in the frame of « LIFE » programme, financed by Eupean Community, UNOPS, Marce Region and a part from local government. The aim of the project was the determination of a sanitary controlled landfill, establishment of small enterprises for waste recycle, set up a monitoring system for waste production, management capacities building.
6. During the 2007 is realized the project "Designing of a waste field for hazardous waste " financed by EuropeAid ,CARDS 2002. A complete designing and all relevant documents for construction of a safe waste field for hazardous waste. The project was managed by EU delegation in Tirana.

### **Belarus**

#### **Year**

2007

#### **Policies**

National Action Plan on Rational Use of Natural Resources and Environmental Protection in the Republic of Belarus for 2001-2005 years, adopted 21.06.2001.  
National Action Plan on Rational Use of Natural Resources and Environmental Protection in the Republic of Belarus for 2006-2010 years, adopted 05.05.2006 by the Decree of the President of Republic of Belarus №302. in which one of priorities specifies the organization of gathering, uses and neutralizations of waste products; perfection of the economic mechanism of wildlife management.

The National plan of action on rational use of natural resources and preservations of the environment of Belarus on 2006 - 2010 is authorized by the Decree of the President of Belarus №302 from May, 5, 2006

By the basic directions of activity in sphere of the management with waste products for 2006-2010 have been allocated:

perfection of the legislation on maintenance ecologically safe handling of waste products;

the organization ecologically safe handling of the waste products formed by manufacture of potash fertilizers;

development and introduction of technologies on use of waste products;

construction of the basic objects providing a safe burial place and processing of waste products;

the organization of ecologically safe storage and neutralization of dangerous waste products;

the organization of ecologically safe storage of waste products and the used equipment, containing polychlorinated biphenyl.

### **Legislation**

The Law of Republic of Belarus «About the tax for using natural resources (the ecological tax)» from December, 23, 1991 in edition of the Low of Republic of Belarus from 31.12.2005 №80-3 ;

The Waste Law, which entered into force from November, 25th, 2003 in edition of the Low of Republic of Belarus from 18.11.2004 №338-3 ;introduces the general obligation to prevent waste generation and to reduce its quantity and harmfulness.

In order to implement the general obligation of the Law a number of normative legal documents have been accepted:

- the Decree of the President of Belarus from 15.06.2005 № 275 "About rates of the tax for using of natural resources (the ecological tax) and some questions of its collection".

- the Decree of the President of Belarus from 10.07.2006 № 437" About some measures on perfection of the organization of gathering (preparation) and use of waste as a secondary raw material";

- the Decision of the Ministry of Natural Resources and Environmental Protection from 28.03.2002 № 4 «About State Register of Technologies for Waste Recycling and on State Register of Facilities for Waste Neutralization and Disposal»;

- the Decision of the Ministry of Natural Resources and Environmental Protection from 28.11.2001 № 21 «About the adoption of Rules for Development, Agreement and Approval of Instruction for management of Industrial Waste»;

- the Decision of the Ministry of Natural Resources and Environmental Protection from 16.11.2001 № 26 «About the adoption of Instructions on Procedure for Registration of Transactions for Alienation and Assignment (except transportation) of Waste to Another Person for a Certain Period of Time»;

- the Decision of the Government 23.01.2002 № 29 « About the statement of the List of waste on Procedure for Registration of Transactions for Alienation and Assignment (except transportation) of Waste to Another Person for a Certain Period of Time»;

- the Decision of Ministry of Health and Ministry of Natural Resources and Environmental Protection from 30.10.2001 № 162/23/13 «About the adoption of Order on Determination of Level of Hazard of Waste and Establishing the Class of Hazard»;

- the Decision of the Ministry of Natural Resources and Environmental Protection from 13.11.2001 № 25 «About the adoption of List of Waste that should have Passports»;

- the Decision of the Ministry of Natural Resources and Environmental Protection from 08.10.2001 № 17 « About the adoption of Form of Special Document for

Accompanying of Transportation of Waste»;

- the Decision of the Ministry of Health of the Republic of Belarus from 22.11.2002 № 81 «About the approval of Instruction about Rules and Methods of Neutralization of Waste Pharmaceuticals, Drugs and Medicines, of Products of Medical Purpose and Clinical Equipment»;

- the Decision of the Government 27.02.2003 № 269 « About the perfection of the System of Collection and Processing of Some Kinds of Secondary Raw Material»;

- the Decision of the Ministry of Housing and Communal Services from 30.07.2003 № 26 «About the adoption of Instruction on the Organization of Separate Collection, Storage and Transportation of Municipal Waste»;

- the Decision of Ministerial council from 20.10.2003 № 1371 «About the adoption of Regulations about Licensing of the Activity Connected to Use of Natural Resources and Influence on the Environment»;

-the Decision of Plenum of the Supreme Court of Republic of Belarus from 18.12.2003 № 13 " About the application by Courts of the Legislation on the Responsibility for Offences Against Ecological Safety and the Environment";

- the Decision of the Trade Ministry from 20.02.2004 № 8 « About the adoption of Procedure for Payments for Organization of the Glass, Paper and Cardboard Packing Waste Collecting and Recycling»;

- the Decision of the Ministry of Housing and Communal Services from 28.12.2004 № 38 «About the adoption of the Program of Municipal Solid Waste Management for 2004-2006»;

- the Decision of the Ministry of Natural Resources and Environmental Protection and the Ministry of Housing and Communal Services from 20.12.2004 № 38|37 «About the adoption of Environmental Requests for Seating and Operation of the Municipal Waste Sorting and Processing Facilities»;

### *Incentives*

The economic mechanism in the field of waste management is defined by the Law "About Environmental Protection" of the Republic of Belarus, the Law " About Waste ", the Law "About Tax on Natural Resource Usage (Ecological Tax) " and other legislative documents of the Republic of Belarus.

Article 38. Provision of economic incentives in the field of waste management:

- Exemption from taxes according to the legislation of the Republic of Belarus to persons during which economic activities the waste management is carried out through application of cleaner technologies and realization of other innovative activity in the field of waste management;

- Allocation according to the legislation of the Republic of Belarus of means from republican and local budgets, budgetary environmental funds for performance of actions for neutralization of hazardous waste;

- Applications of the accelerated amortization of the basic production assets of the persons who are carrying out during economic activities use or neutralization of waste products;

- Other kinds of provision of economic incentives according to the legislation of the Republic of Belarus.

The procedure of the measures connected to provision of economic incentives for introduction of cleaner-production technologies in manufacture, is defined by the legislation of the Republic of Belarus.

According to the legislation the ecological tax are assessed:

volumes of the production wastes placed on objects of accommodation of waste;

volumes of the placed goods which placed under a customs mode of destruction and has lost the consumer properties, and also the waste formed as a result of destruction of the goods, placed under this mode;

volumes made and (or) imported plastic container and other goods, after loss of

consumer properties are formed the waste rendering harmful influence on an environment and demanding the organization of systems of their gathering, neutralization and (or) uses. The list made and (or) imported plastic container and other goods, after loss of which consumer properties the waste rendering harmful influence on an environment and demanding the organization of systems of their gathering, neutralization are formed and (or) uses, is established by the President of Republic of Belarus;

The size of a payment is established under the rates of the tax differentiated on a degree of toxicity of a withdrawal. Limits on waste accommodation are established.

For accommodation of production wastes over the established limits or without the established limits if their establishment is provided by the legislation, the tax is raised in the 15-fold size of the established rate of the tax.

In order to improve the ecological situation and increase the level of waste collection and recycling, gathering on the organization of preparation of glass, paper and cardboard containers as a secondary raw material is used from July1, 2006.

### ***Industry***

The generators of waste should develop the norms for waste generation and get agreement on them from territorial bodies of the Ministry of Natural Resources and Environmental Protection. The waste generation norms help with operational quantitative control on waste generation and are used for development of waste disposal limits.

Legal persons and individual businessmen carrying out economic and other activity rendering harmful influence on an environment implement ecological control. One of the primary goals of the industrial ecological control, over the industrial analytical control is the control over the reference with dangerous substances, waste products. Besides sources of formation (generation) of waste products, including manufactures, shops, sites, technological processes and separate technological stages are included in the list of objects of the industrial ecological control subject to regular supervision and a rating.

### ***Others***

#### **Bosnia & Herzegovina**

***Year*** 2007

#### ***Policies***

National strategies for hazardous waste is not prepared.

#### ***Legislation***

None

#### ***Incentives***

None

#### ***Industry***

None

#### ***Others***

None

#### **Bulgaria**

***Year*** 2007

#### ***Policies***

The prevention of the waste generation is one of the main objectives of the NWMP. It requires using to the maximum degree of the potentiality for minimization of the quantity of the waste generated.

The programme envisages that the following results for the different categories shall be achieved till 2007:

- reduction of the generated hazardous waste quantities in comparison with the quantities from 2001.

The increase of the costs for disposal of the waste is an incentive for waste recycling and minimization. For the enlargement of the market for the materials obtained from waste recycling it is necessary:

- application of tax concessions and other economic instruments for encouraging the waste recycling and recovery;
- construction of new facilities for recycling of waste;
- encouragement of the introduction of new technologies in the field of waste reuse and recycling;
- encouragement of the placing on the market of goods produced from waste materials.

The export of wastes for recycling also should be developed in case their recovery in the country and the construction of the respective new capacity is not justifiable.

This requires fulfilment of the procedures for export of waste for recycling set in the legislation. The costs for collection, separation and transportation should not impede the export of waste.

### **Legislation**

- The Regulation EC 259/93 valid until July 12, 2007
- The new Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste in force since July 13, 2007.
- Waste Management Act (Prom. SG. 86/30 Sep 2003, amend. SG. 70/10 Aug 2004, amend. SG. 77/27 Sep 2005, amend. SG. 87/1 Nov 2005, amend. SG. 88/4 Nov 2005, amend. SG. 95/29 Nov 2005, amend. SG. 105/29 Dec 2005, amend. SG. 30/11 Apr 2006, amend. SG. 34/25 Apr 2006, amend. SG. 63/4 Aug 2006)
- Ordinance on the cases for which permit or registration is required for import, export and transit of waste, establishment of bank guarantee and on the control of transboundary movement of waste (only partial)
- National Waste Management Program (2003-2007)

### **Incentives**

Product charge for putting on the market of electronic equipment, batteries and accumulators, tires and vehicles.

### **Industry**

The companies that produce big quantities of hazardous waste will also construct their own disposal facilities in compliance with the conditioning plans and their waste management programmes approved by RIEWs. The main efforts will be directed towards effective implementation of the legislation within the fixed terms and formulation of measures ensuring the implementation of the Programme.

Till the construction of suitable disposal/recovery facility the export of hazardous waste for disposal outside the country will be allowed by observing the requirements of the national legislation in force, Regulation (EEC) 259/93 on the supervision and control of the shipment of waste within, into and out of the European Community and the Basel Convention on the control of transboundary movement of hazardous waste and their disposal.

### **Others**

#### **Croatia**

#### **Year**

2007

#### **Policies**

The National strategy on waste adopted on 14th October 2005 by the Croatian Parliament, contains instruments for:

- avoiding and reducing the generation of waste and reducing the hazardous properties of waste at source (cleaner production),
- developing and establishing programmes of systematic education on waste,
- recovering the valuable properties of waste for material or energy purposes

The National Plan on waste adopted on 19th July 2007 on the basis of National Strategy on waste. It contains instruments for:

- avoiding the generation of waste (apply measures which aim is to decrease amount of waste)
- education and communication with administrative structures, experts and public
- separate collection of waste at the source of production
- avoiding and reduce of waste wich is generated in production processes (develop different tehcnological and logistical solutions in production processes; systematic control of all phases in processes where waste is produced; apply tehcnological processess which produce the smallest amount of waste - cleaner production)

### **Legislation**

Waste Act, Official Gazette, No. 178/04:

#### Article 5

(1) The objectives of waste management are:

1. avoiding and reducing the generation of waste and reducing the hazardous properties of waste, particularly through:

- the development of clean technologies that exploit less natural resources,
- technical development and promotion of products that do not contribute or minimally contribute to the increase of adverse effects of waste and the risk of pollution,
- the development of appropriate methods for the disposal of hazardous substances contained in waste intended for recovery,

2. waste recovery through recycling, reuse or reclamation, or through some other procedure that allows separating secondary raw materials, or use of waste for energy purposes,

3. waste disposal in the prescribed manner,

4. remediation of environment polluted by waste.

(2) In the achievement of the objectives referred to in paragraph 1 of this Article only the most efficient available technology and its economic feasibility shall be taken into consideration, in accordance with the principles referred to in Article 6 of this Act.

#### Article 12

(1) A producer of waste who produces more than 150 tons of non-hazardous waste or more than 200 kilograms of hazardous waste shall be obliged to plan waste management for a four year period.

### **Incentives**

1. Croatian Environmental Protection and Energy Efficiency Fund (CEPEEF) established by a decision of the Government of the Republic of Croatia is State Non-Budget Fund in charge for financing and co-financing projects, programmers and investments related to improvement environment and energy efficiency.

2. The Croatian Environmental Protection and Energy Efficiency Fund in 2004 started to collect the charges on burdening the environment with hazardous waste from companies producing hazardous waste. This charges are defined according to the Article 15 of the Environmental Protection and Energy Efficiency Fund Act (Official Gazette, No.107/03). This Article sets the obligation to companies to pay the charge on the basis of quantities of hazardous waste produced but untreated and not exported, and on the basis of hazardous waste characteristics.

3. Also, during 2005, 2006, 2007 and 2008 Ordinances were adopted wich shall regulate the method of handling packaging and packaging waste (OG 97/05, 115/05, 81/08), waste tyres (OG 40/06), waste oils (OG No. 124/06), waste batteries and

accumulators (OG No. 133/06), end-of-life vehicles (OG No.136/06), asbest waste (OG No. 42/07), medical waste (OG No. 72/07) and electrical and electronic waste (OG No. 74/07), construction waste (OG 38/08), wastewater treatment sludge (OG 38/08), waste generated in titanium dioxide production (OG 70/08), polychlorinated biphenils and polychlorinated terphenils (OG 105/08) and mineral waste (OG 128/08).

**Industry** Certain facilities have established ISO 14001 Environmental Management System. Some of the companies have taken part in cleaner production programmes initiated by the Croatian Center for Cleaner Production.  
Companies are preparing waste management plans in accordance to the Waste Act, Article 12.

#### **Others**

#### **Czech Republic**

**Year** 2007

**Policies** State Environmental Policy (2004-2010)  
In this policy, the target to reduce the specific generation of hazardous wastes by 20 % by the year 2010 as well as other targets aimed at selected of hazardous waste streams have been set. The targets are closely interconnected to those of the Waste Management Plan of the Czech Republic (see below). Evaluation of the State Environmental Policy (2004–2010) for the period 2004-2006 has been performed. It has been concluded that all targets concerning hazardous wastes are being met. National Environmental Management Programme; National Eco-labelling Programme; and National Programme of Cleaner Production; Green public procurement ;the Czech Republic Strategy for Sustainable Development.

**Legislation** Act on Waste No. 185/2001 Coll., as last amended by Act No. 314/2006 Coll. (in force from June 2006)..

Waste Management Plan of the Czech Republic (Government Decree No. 197/2003 Coll.)

Regional Waste Management Plans for all 14 regions of the Czech Republic.

National Implementation Plan of the Stockholm Convention on Persistent Organic Pollutants.

**Incentives** Support of waste management projects from the public budget within various programmes.

Support from the funds of the European Union within various programmes of the European Commission.

Support of the implementation of EMAS for small and medium-sized enterprises.

Fee for landfill of waste (basic component of fee – for depositing of waste, risk component of fee – for depositing of hazardous waste).

Financial reserve for reclamation of landfills.

#### **Industry**

Implementation of cleaner production projects.  
Implementation of environmental management systems (EMS/EMAS).  
Implementation of the National Eco-labelling Programme.

**Others** Voluntary agreements between Ministry of the Environment of the Czech Republic and the following partners:  
Confederation of Industry of the Czech Republic and Czech Business Council for Sustainable Development  
Association of Entrepreneurs in Building Industries and Association for Eco-building  
Economic Chamber (common section for the environment at the economic chamber)

## **Estonia**

**Year** 2007

### **Policies**

The environmental policy of the Estonian government has been provided by the National Environmental Strategy (1997) and the National Environmental Action Plan (NEAP: 1998), which also set guidelines for legal development. National Waste Management Plan (2002).

**Legislation** Waste act, Packaging Act, etc.

### **Incentives**

### **Industry**

### **Others**

## **Georgia**

**Year** 2007

### **Policies**

**Legislation** The 2001 Order of the Minister of Labour, Health and Social Affairs No. 300/N on the adoption of rules for the collection, storage and treatment of medical waste.

2003 Order of the Minister of Labour, Health and Social Affairs No. 36N on sanitary rules and norms for arranging and operating municipal solid waste landfills.

### **Incentives**

### **Industry**

### **Others**

Several projects were implemented aiming the reduction and/or elimination of the amount of hazardous wastes and other wastes generated

1. In frames project "Inventory collection packaging and temporary safe disposal of obsolete and non usable pesticides in Georgia" (2007 financed by state budget, )was collected, packed and stored safely 113 Tone of obsolete and non usable pesticides .

2. Project "Support of the Ministry of Environment Protection and Natural Resources of Georgia in Environmental Planning " was carried out Inventory of generated Wastes in Georgia.( 2007-2009,financed by UNDP, Czech Governance fund).

3.The project "Regional implementation of the National waste Policy plan" was implemented in Ajara region ( 2006-2009,financed by Dutch Ministry of Housing, Spatial Planning and the Environment).

4. Intentional project "Promoting community involvement in local waste management "( 2006-2009,financed by Dutch Ministry of Housing, Spatial Planning and the Environment) was implemented in Foti-Batumi Black Sea coastal zone.

5. In frames of international Project "Elimination of Acute Risks of Obsolete Pesticides in Moldova, Kyrgyzstan and Georgia" which was carried out in 2005-2008 and was financed by the Dutch Ministry of Foreign Affairs, Development cooperation and TMF programme DOEN Foundation" 117 tone of Obsolete Pesticides was collected, packed and stored safely.

## **Hungary**

<b>Year</b>	2007
<b>Policies</b>	<p>The National Environmental Program contains 19 measures for waste reduction and recycling/reuse measures, including hazardous wastes.</p> <p>The National Waste Management Plan was accepted by the Hungarian Parliament on November 2002. This Plan contains the financial and technical measures for implementation till 2008.</p> <p>Based on the NWMP the regional environmental authorities have created the regional waste management plans for the seven statistical regions. These plans were issued due to the prescriptions, given in the Decree of Ministry of Environment and Water 15/2003 (XI. 7.)KvVM. Local authorities and companies have also obligation for preparing similar waste management plans. Regional environmental authorities have to control the plans of local municipalities and these plans have to be published in the form of municipal decrees. In order to keep the plans of different levels harmonised, the structure and content requirements of these plans are laid down in Decree 126/2003.(VIII. 15.)Korm.</p>
<b>Legislation</b>	<p>Unless a legal rule provides otherwise, the producer shall prepare a three-year waste management plan for the prevention of the generation of its hazardous wastes, for the reduction of the hazard level and the quantity of its hazardous wastes, and for the recuperation and disposal thereof.</p> <p>Unless a legal rule provides otherwise, the producer of hazardous waste shall draw up a material balance in respect of each of its activities resulting in hazardous waste.</p> <p>On application, the National Inspectorate for Environment and Nature may authorize the drawing up of the material balance in a simplified form.</p>
<b>Incentives</b>	<p>The Ministry of Environment administers the financial fund that contributes to the development of municipalities waste management tasks, supports the investments that lead to reduce, eliminate, recycling or final disposal of hazardous wastes. In 2004 the subsidy system changed, the seven regional centres determine the aims of support and award the main part of the subsidy. From this year on, the regional development councils will do the tendering of the national environmental fund and the special subsidies.</p>
<b>Industry</b>	<p>Companies having considerable influence on waste management also have to create individual waste management plans and forward them to the regional environmental authorities.</p>
<b>Others</b>	None.
<b>Latvia</b>	
<b>Year</b>	2007
<b>Policies</b>	National Waste Management Plan, 2006-2012.
<b>Legislation</b>	Waste Management Law, Law on Natural Resource tax.
<b>Incentives</b>	Natural resource tax for disposal of hazardous waste, natural resource tax exemption for collection and for recovery of hazardous wastes.
<b>Industry</b>	
<b>Others</b>	
<b>Lithuania</b>	

<b>Year</b>	2007
<b>Policies</b>	Government Resolution No 519 On National Strategic Waste Management Plan adopted on 12 April 2002, lastly amended on 31 October 2007 by Government Resolution No 1224. The National Hazardous Waste Management Programme, approved on 11 January 2006 by Government Resolution No 19.
<b>Legislation</b>	Law No VIII-787 on Waste Management adopted on 16 June 1998 (as lastly amended by Law No IX-1004 on Waste Management adopted on 1 July 2002); Order No 217 on Rules of Waste Management adopted on 14 July 1999 by the Minister of Environment (as amended on 30 December 2003 by the Order No 722 of the Minister of Environment); The Order No D1-330 on Rules of Issuance, Renovation and Cancellation of Integrated Pollution Prevention and Control permits adopted on 5 June 2005 by the Minister of Environment; Law No IX-720 On the Amendment of the Law On Environmental Pollution Charges, adopted on 22 January 2002.
<b>Incentives</b>	Product charges approved by the Law No IX-720 on the Amendment of the Law on Environmental Pollution Charges adopted on 22 January 2002.

**Industry**

**Others**

**Montenegro**

<b>Year</b>	2007
<b>Policies</b>	<p>Republic of Montenegro has on the 26th of February 2004 adopted National Waste Management Policy which supplements the vision, principles and goals set out in the Environmental Programme as well as in already existing national regulations and standards. This policy of integrated and sustainable waste management in Montenegro sets out a vision for the future waste management and defines objectives and strategies facilitating its achievement. The purpose of this policy is:</p> <ul style="list-style-type: none"> <li>- promote the prevention and minimization of waste generation and hence pollution at source;</li> <li>- promote the management and minimization of the impact of unavoidable waste from its generation to its final disposal;</li> <li>- ensure the integrity and sustained “fitness for use” of all environment media i.e. air, water and land;</li> <li>- ensure the remediation of any pollution of the environment by holding the responsible parties accountable.</li> </ul> <p>The Government of Montenegro has adopted Republic-Level Waste Strategic Master Plan in 2005. The Waste Management Strategic goals are as follows:</p> <ul style="list-style-type: none"> <li>- Determine main orientation of waste management for the medium term national development;</li> <li>- Implement EU strategic plans through adoption of EU waste related directives;</li> <li>- Determine priorities of waste management options.</li> </ul> <p>The aim is to minimize the impact of waste on the environment, to improve resource use efficiency and to remedy past mismanagement of waste.</p> <p>The Master Plan sets the overall objective of ensuring progress towards sustainable management of waste generated on the territory of the Republic and in the medium term achievement of the waste reduction targets as indicated in relevant European Union’s waste related directives.</p> <p>The Master Plan also establishes interim targets, which reflect the short-term needs</p>

to focus on  
municipal, hazardous, healthcare and other waste streams:  
- Increase the amount of waste collected;  
- Reduce landfilling of waste generated;  
- Introduce recycling activities.

The system of management of hazardous waste is based on the establishment of one Hazardous Waste Treatment Centre with the associated landfill and an incineration facility, serving the entire country considered as one catchments area. Treatment of waste involves method of solidification / stabilization of inorganic and solid organic waste, incineration of waste and in the short term perspective, export of liquid organic waste. Export of special waste, such as PCB and batteries is also part of the proposed management system.

### **Legislation**

The Law on Confirmation of Basel Convention, adopted by Federal Parliament at 24th December 1999 - "Off. Gazette FRY", International Agreements, No.2/990; The Law on the Environment ("Off. Gazette RCG", No.16/96) prohibits the application and use of technology, products, semi-products or raw material that are forbidden in the country of export or in the country in which they are produced; disposal of all types of waste, except at the places selected for the purpose (Article 9, paragraph 2 and 6). It restricts import of waste substances except upon the permit issued by the Ministry in charge of environment protection, for disposal of the wastes having the properties of deleterious and hazardous substances at the designated sites and upon the preliminary consent of the Ministry (Article 10, paragraph 1 and 2).

The Law on the Basis of the Environmental Protection ("Off. Gazette FRY", No.24/98) is the framework for waste management in compliance with UN and EU. The Rules on Import, Export and Transit of Wastes in the FR of Yugoslavia ("Off. Gazette FRY", No.69/99), based on the Law on the Basis of the Environmental Protection, regulate the transboundary movements of hazardous and other wastes (import, export and transit and obligations of the performer of this activity, lists of hazardous and other wastes, harmonized with BC annexes and EU/OECD lists, control system through the notification procedure and movement document);

The operational aspects of waste management are primarily regulated under two laws and two technical regulations:

The Law on cleanliness, collection and use of waste (OGM No. 20/81, 2/89, 19/89, 29/89, 48/91, 17/92, 27/94,);

The Law on the transport of hazardous substances (Official Gazette of the Federal Republic of Yugoslavia No. 27/90, 24/94, 28/96, 68/02) - establishes conditions for transport of hazardous substances and operations which are related to the transport (e.g. packaging, loading and unloading).

The Regulation on sanitary-technical conditions that dumps and locations for delivering feces have to satisfy, arrangement of dumps and locations for delivering feces and disposal of garbage and feces (OGM No. 20/83);

The Regulation on criteria for the selection of locations, the way and action for storage of the waste material (OGM No. 56/00) - regulates hazardous waste separation, collection, transportation (also regulated by the LTHS), temporary storage, treatment, final disposal, notification, and monitoring of waste amounts and types generated and disposed of to landfill.

The Government of Republic of Montenegro has adopted Waste Management Law in December 2005 and it entered into force on the eighth day from the date of

publishing in “Official Gazette RM”, No. 80/05. It shall be applied starting from November 1st, 2008.

***Incentives***

***Industry***

***Others***

**Poland**

***Year*** 2007

***Policies*** The reduction of hazards posed by hazardous waste is one of the priorities of the National Environmental Policy and waste management plans. The Polish Act of 27 April 2001 on waste (Official Journal of 2007 No. 39, item 251, further amended) introduce obligation to prepare waste management plans which are subject to at least each 4 years updating.

The first such national management plan (NWMP) was approved by resolution No. 219 of the Council of Ministers of Republic of Poland, of 29 October 2002 (Governmental Gazette of 2003, No.11, item 159).

The second NWMP “National Waste Management Plan 2010” was approved by resolution No. 229 of the Council of Ministers of Republic of Poland, of 29 December 2006 (Governmental Gazette of 2006, No.90, item 946). The NWMP 2010 covers waste generated domestically, particularly municipal waste, hazardous waste, packaging waste and municipal sewage sludge, as well as waste imported into the national territory.

The objectives and tasks presented in the Plan relate to the period 2007 – 2010 and in the 2011-2018 perspective.

***Legislation***

The Polish Act of 27 April 2001 regulates the issues related to waste management including reduction and elimination of generation of hazardous waste and other waste. The Act imposes standards for recovery and disposal of waste (in line with the EU requirements) and defines system of permits for the generation and further handling of hazardous waste.

The Act of 11 May 2001 on Economic Operators’ Obligations in the Scope of Managing Certain Types of waste and on the Product and Deposit Charges (Official Journal of 2007 No. 90, item 607, further amended), the Act of 20 January 2005 on recycling of End-of Life Vehicles (Official Journal 2005, No. 25, item 202, further amended) and the Act of 20 October 2005 of Waste Electrical and Electronic Equipment (Official Journal No. 180, item 1495) also regulates the issues related to this specific types of hazardous waste.

***Incentives***

The Act of 11 May 2001 on Economic Operators’ Obligations in the Scope of Managing Certain Types of Waste and on the Product and Deposit Charges (O.J. of 2007, No.90, Item 607, further amended), came into force on 1 January 2002. It contains legal and economic instruments (the obligation to recover waste - or pay product charges) promoting the establishment of a system for collection and recovery of certain types of hazardous waste (waste oils, discharge lamps, batteries and accumulators).

***Industry***

***Others***

**Republic of Moldova**

***Year*** 2007

***Policies***

National Program for Waste Utilization, the principles of which are:  
To prevent the generation of waste and reduce its harmfulness;

Waste materials should be reused, recycled or recovered, or used as a source of energy; and

Waste should be disposed of safely (by incineration or in landfill sites).

### ***Legislation***

The Law nr. 1515-XII of 16.06.93 on Environmental Protection;  
The Law nr. 1236-XIII of 3.07.97 on Regime of Harmful Substances and Products;  
The Law nr. 1347-XIII of 9.10.97 on Waste of Production and Consumption; and  
Guidelines "ABC of waste".

### ***Incentives***

Payments for Environmental Pollution, including waste disposal, Law No. 1540-XIII of 25.02.1998 on payment for environmental pollution, based on the principle "polluter pays."

### ***Industry***

In accordance to the national legislation, the industry/waste generator are obliged to use cleaner technologies; take in evidence all waste; use waste without any risk; and ensure waste disposal and recovery on the basis of the contract between economical agents and respective license owner etc.

### ***Others***

#### **Romania**

#### ***Year***

2007

#### ***Policies***

The Emergency Ordinance no. 78 / 2000 on Waste regime modified and completed by Emergency Ordinance no.61/2006. In accordance with art. 8 of this Emergency Ordinance the national competent authority was elaborated Plans for management of wastes.

In accordance with art. 19 (2) of the Emergency Ordinance no. 78/2000 modified and completed by Emergency Ordinance no.61/2006, producers of wastes shall adopt technologies and solutions for reduction and elimination of generation of wastes.

#### ***Legislation***

In accordance with art. 54 of the Emergency Ordinance no. 78 / 2000 modified and completed by Emergency Ordinance no.61/2006, by Governmental Decisions, at proposal of national competent authority are regulated: different ways of management for waste categories existed in this ordinance, functional conditions of waste treatment and disposal plant, conditions of waste shipment, conditions of waste import/export/transit and other aspect which can appear in waste management activity.

The Governmental Decision no. 173 / 2000 on regulation of PCB and similar compounds modified by Governmental Decision no. 291/2005, Governmental Decision no.210/2007, Governmental Decision no.975/2007.

The Governmental Decision 662/2001 on waste oils modified by Governmental Decision no 235/2007 regarding disposal used oils.

The Governmental Decision 1057/2001 on used batteries and accumulators which contains hazardous substances.

The Governmental Decision no. 128/2002 on waste incineration modified and completed by Governmental Decision no. 268/2005.

The Governmental Decision no. 349/2005 which repealed the Governmental Decision 162/2002 on landfilling of waste.

The Governmental Decision no. 856/2002 regarding waste lists and inventory of waste (transposition of the New European Waste Catalogue).

The Governmental Decision no.448/2005 regarding WEEE.

The Governmental Decision no.2406/2004 regarding ELV modified and completed

by Governmental Decision no.1313/2006.

***Incentives***

Economic instruments for reduction and elimination of generation of wastes are in preparation. These economic instruments shall be in relationships with provisions of the Emergency Governmental Ordinance no.196/2005 on Environmental Fund approved by Law no. 105/2006.

***Industry***

***Others***

***Serbia***

***Year***

2007

***Policies***

National Strategy for Wastes on Republic of Serbia level is adopted in 2003. National Strategy is basic document providing conditions for the rational and sustainable republic waste management. In the following phase, the Strategy has to be supported by several implementation plans for collecting, transport, treatment and disposal of controlled waste. The strategy covers waste management legal framework, policy analyses, waste management options, strategies, priority activities and instruments.

According to the National Programme for Integration of Serbia into EU the priority waste streams are the following:

- management on specific waste streams is of high importance of the Republic of Serbia, especially used accumulators and dry batteries, PCBs waste, POPs waste, medical waste, electronic and electrical waste. end of life vehicles
- institutional strengthening for hazardous waste management which shall provide enhanced administrative capacity and establish the national system for hazardous waste management.
- training of the customs officers, environmental inspectors and policy in the field on hazardous waste identification

***Legislation***

Basic laws:

- The Law on Confirmation of Basel Convention, (“Off.Gazette FRY”, International Agreements, No.2/90)
- The Law on Environmental Protection (“Off.Gazette RS”, No.135/04)
- Law on Integrated Pollution and Prevention Control (“Off.Gazette RS”, No.135/04)
- Law of Strategic Environmental Assessment (“Off.Gazette RS”, No.135/04)
- Law on Environmental Impact Assessment (“Off.Gazette RS”, No.135/04)
- The Law on Handling of Waste (“Off. Gazette”, No.25/96, 26/96 and 101/05)
- Customs Act (“Off. Gazette RS”, No.73/03)
- The Law on Transportation of Hazardous Substances (“Off. Gazette SFRY”, No. 27/90, 45/90, and Off. Gazette FRY No. 24/94, 28/96, 21/99, 44/99, 68/02)
- The Law on Production and Trade of Poisonous Substances (“Off. Gazette FRY”, No. 15/95, 28/96, 37/2002, (“Off. Gazette FRY”, No. 101/05)
- Law on Communal Activities (“Official Gazette RS”, 16/97 and 42/98)
- The Law on Foreign Trade (“Off. Gazette RS”, No.101/05)
- The Law on Medicines and Medicinal Equipment (“Off. Gazette RS”, No.84/04 and 85/05)

Basic bylaws:

- The Regulation on Documentation to be Submitted with the Application for Issuing Permit for Import, Export and Transit of Wastes (“Off.Gazette FRY”, No.69/99)
- The Regulation on the Treatment of Wastes Having Hazardous Characteristics (“Off. Gazette RS No.12/95)

- The Regulation on Criteria for Determining Location and Disposition of Waste Materials Deposit Sites (“Off. Gazette RS” No.54/92)
  - The Regulation on Methodology for Chemical Accident Risk and Environmental Pollution Assessment, Preparatory Measures and Measures for Remediation Consequences (“Official Gazette of RS 60/94)
  - The Regulation on Conditions of Secondary Raw Materials, Classification, Package and Storage (“Off. Gazette RS”, No.55/01)
  - The Regulation on Packages for Pesticides and Fertilizers and Destruction of Pesticides and Fertilizers (“Off. Gazette FRY”, No. 35/99 and 63/01)
  - The Regulation on Destroying Unused Poisons and Package Used for Packaging Poisons, and on Withdrawal of Poisons from Circulation (“Off. Gazette RS”, No.7/83)
  - The Regulation on Destroying Medicines, Medicinal Products and Equipment (“Off. Gazette FRY”, No.16/94 and 22/94)
- In Parliament procedure are Law on Waste Management and Law on Packaging and Packaging waste. Under preparation is approximately twenty draft regulations regarding waste management (including waste streams), packaging and packaging waste.

**Incentives** Economic instruments were initiated in Strategy on Waste Management in Serbia (2003), as well as in republic (Serbia) laws on environmental protection. According Law on Environmental Protection of Serbia (2004) the Environmental Fund is established.

**Industry** Our country produces relatively large quantities of different types of waste, which, in view of their quantity or properties, are a threat to the environment. Major generators of hazardous wastes are the chemical, oil, petrochemical, metal, paper, leather and textile and transport industries. Minor generators include car, repair shops, surface metal working shops, dry cleaners, etc. Many wastes have a high content of non-degradable products and chemicals that pollute the environment. Processing technologies are inadequately developed or elaborated.

Pressure of staying on international market has forced the raise of the environmental and service standards within industries and municipalities, as well as has increased waste management through promotion of transfers of environmental technologies and cleaner production.

However, currently most of the industries/waste generators are dealing with after war clean-up activities, rather than with measures leading to pollution prevention.

**Others** Environmental security, in particular, characterization, safe removal and permanent storing of all categories wastes resulting from war activities is a difficult and expensive process.

## **Slovakia**

**Year** 2007

**Policies** Taking into account a waste management legislation valid since 1 July, 2001, after Act No. 223/2001 on wastes and amendments of certain acts has entered into force and taking into account deep changes in the building up of the waste management the new strategic document entitled Waste Management Programme of the Slovak Republic for the time period 2006 - 2010 (WMP 2006-2010) was prepared instead of WMP until 2005.

According to the Waste Act the purpose of waste management is  
 -to prevent and reduce waste generation by:  
 -development of technologies saving natural resources;

- production of products which, as well as final products, increases the amount of waste in a minimal possible way and reduces environment pollution in a maximal possible way; and
- development of suitable methods of disposal of hazardous substances found in waste dedicated to disposal.
- to recover waste by recycling, reusing or by other processes allowing to gain secondary raw materials if prevention of waste generation is not feasible to achieve;
- to use waste as a source of energy if material recovery is not feasible to achieve;
- to dispose of waste in environmentally sound manner and not endangering human health.

Obligatory part of the WMP 2006-2010 prescribes following goals for the time period 2006-2010:

- to achieve a material recovery for 70 % of wastes in relation to the amount of wastes generated in Slovakia in the year 2010
- to increase energy recovery of wastes up to the rank of 15 % in relation to the total amount of wastes generated in Slovakia in the year 2010
- to decrease amount of landfilled wastes up to 13 % for an amount of wastes generated entirely in the year 2010
- to prefer waste incineration with energy recovery wholly.

### **Legislation**

Act of the National Council of SR No 409/2006 Coll. On Waste and on amendments of certain acts as amended by subsequent regulations (full text of the Act No 223/2001 Coll. Containing all amendments issued to the Act No 223/2001 Coll.);  
 Act of the National Council of SR No 17/2004 Coll. On fees for waste landfilling;  
 Act of the national Council of SR No 127/2006 Coll. On persistent organic substances and on amendments of the Act No 223/2001 Coll. On Waste and on Amendments of certain acts as amended by subsequent regulations;  
 Act of the National Council of SR No. 529/2002 Coll. On Packaging and Amendments of Some Acts as amended by subsequent regulations;  
 Government Order of the SR No 153/2004 Coll. Establishing obligatory limits on reuse of parts of end-of life vehicles and on recovery and recycling of wastes from ELV treatment (i.e. recovery and recycling limits)  
 Government Order of the SR No 220/2005 Coll. establishing obligatory limits on the extent of recovery of packaging waste and to the extent of their recycling in relation to the total weight of packaging waste;  
 Government Order of the SR No 388/2005 Coll. on obligatory limits for WEEE recovery, re-use and recycling of components, materials and substances;  
 Decree of MoE SR No 283/2001 Coll. on Implementing Certain Provisions of the Act on Wastes as amended by subsequent regulations;  
 Decree of MoE SR No 284/2001 Coll. on Waste Catalogue as amended by subsequent regulations;  
 Decree of the MoE No 125/2004 Coll. on details of ELV treatment and on some demands on vehicle processing as amended by Decree of the MoE No 227/2007 Coll.;

Decree of MoE SR No 126/2004 Coll. on authorisation, on issuing expert opinions, on authorised persons in waste management and on verification of professional skills those persons as amended by Decree of MoE SR No 209/2005 Coll.;

Decree of the MoE SR No 127/2004 Coll. on tariff rates for calculation of fees to Recycling Fund, on list of products, materials and equipments that a fee is required to pay to Recycling Fund and on details of application form concerning financial contribution granted by Recycling Fund as amended by Decree of the MoE SR No 359/2005 Coll.;

Decree of MoE SR No. 135/2004 Coll. on decontamination of facilities containing polychlorinated biphenyls;  
 Decree of the MoE No 208/2005 Coll. on WEEE management as amended by  
 Decree of MoE SR No 313/2007 Coll.;  
 Decree of MoE SR No 732/2002 Coll. on list of backup packaging that are not reusable and on a financial deposit for them and for backup reusable packaging;  
 Decree of MoE SR No 210/2005 Coll. on implementing certain provisions of the Act on Packaging;  
 Notification of the MoE SR No 75/2002 Coll. on issuing the Decree No. 1/2002 which establishes the unified methods for analytical control of wastes;  
 Notification of the Ministry of Foreign Affairs SR No 593/2004 Coll. on enjoyment of Stockholm convention on POPs  
 Communication of Ministry of Foreign Affairs No 60/1995 Coll. on Accession of Slovak Republic to Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;  
 Communication of Ministry of Foreign Affairs No 132/2000 Coll. on a change in Annex 1 and on adoption of two new Annexes No. VIII and IX to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;  
 Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste;  
 Commission Regulation (EC) No 1379/2007 amending Annexes IA, IB, VII and VIII of Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste, for the purposes of taking into account of technical progress and changes agreed under the Basel Convention;  
 Commission Regulation (EC) No 669/2008 on completing Annex IC of Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste;  
 Commission Regulation (EC) No 1418/2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on control of transboundary movements of wastes does not apply;  
 Commission Regulation (EC) No 740/2008 amending Regulation (EC) No 1418/2007 as regards the procedures to be followed for export of waste to certain countries;  
 Treaty of Accession of the SR to the EU (Annex XIV, 9(B) (1));

### ***Incentives***

- A fee for landfilling of wastes;
- EU financial instruments - PHARE – Unallocated Institution Building Facility (UIBF ), Operating Programme Environment financed by European Regional Development Fund and Cohesion Fund focused on improvement of waste management in Slovakia
- Recycling Fund – fees paid by producers and importers (10 specified commodities); financial contributions are used to support collection and waste recovery;
- Local fees paid to the municipalities for collection, transport and disposal of municipal waste and construction waste (generators of municipal waste pay local fees);
- Environmental Fund provides financial contributions to support separate collection, waste recovery, closing and recultivation of landfill sites;
- Financial guarantee covering the costs of re-import and disposal, in case when transboundary movement cannot be completed.

### ***Industry***

The priorities given in the guiding part of the WMP 2006-2010 regarding waste

recovery/disposal facilities are as follows:

for the industrial field:

- To apply waste recycling technologies in practice that are not used sufficiently in conditions of Slovakia;
- To build up missing capacities for waste recovery and to replace technical obsolete technologies with new BAT, BATNEEC;
- To increase technical/technological level of hazardous waste handling;
- To target the technologies with higher degree of recovery for output commodities resulting from wastes consisting different materials (e.g. consumer electronic: plastics, glass, non-ferrous metals, etc.);
- To optimize hazardous waste incineration capacities to essential extent responding to the industrial structure and waste generation in other areas.

for the municipal field:

- To improve a technical equipment for waste separate collection in the cities and municipalities
- To increase effectiveness of collection systems – to collect more fractions from municipal waste
- To solve the collection system of hazardous fractions inhere in a municipal waste from the view of the technical-organizational arrangement

**Others**

Promotion activities organized at state, local, non-governmental levels, as follows: trainings, advisory services, information campaigns aimed at elimination of non-hazardous and hazardous waste generation.

**Slovenia**

**Year**

2007

**Policies**

- Resolution on National Environmental Action Program for period 2005-2012 (2006);
- Environmental Performance Reviews (1997);
- Strategic Plan for Slovenia in the Area of Waste Management (1996);
- Operational plan concerning the disposal of PCB's and PCT's for period 2009-2012 (2009);
- Operational plan concerning disposal of waste with the purpose of decreasing quantities of biodegradable waste for period 2009-2013 (2008),

See also :

[http://www.mop.gov.si/si/delovna\\_podrocja/direktorat\\_za\\_okolje/sektor\\_za\\_okoljske\\_politike/](http://www.mop.gov.si/si/delovna_podrocja/direktorat_za_okolje/sektor_za_okoljske_politike/)

Measures taken for the reduction and/or elimination of the amount of hazardous wastes and other wastes generated are in accordance with EU waste management polices.

**Legislation**

Environmental Protection Act (2004) as amended and from it deriving legislation on the field of waste management.

**Incentives**

Eco-dues for WEEE, end of life vehicles, old tires, waste disposal; use of lubricating oils and liquids, waste packaging and other eco-dues and financial instruments (e.g. advantageous credits for environmental investments, joint investments into project for reduction of environmental burdens).

**Industry**

ISO; EMAS registration system (ECO- Management and Audit Scheme); ECO-LABELING; - European flower; and awards for achievements on the field of protection of the environment and introduction of cleaner technologies.

## *Others*

### **Ukraine**

#### *Year*

2007

#### *Policies*

- Verkhovna Rada (Parliament) of Ukraine 05.04.1998 adopted the national strategy of wastes generation minimization. This strategy was included into the legislative document “The main directions of the state policy in the field of environment protection, natural resources use and ecological safety ensuring”; and  
- Verkhovna Rada of Ukraine 14.01.2000 passed the law “On the withdrawal from circulation, treatment, utilization, elimination or further use of unsound and hazardous products”.

#### *Legislation*

- Verkhovna Rada of Ukraine 14.09.2000 passed the law “On the National program of toxic waste management”;  
- The Cabinet of Ministers of Ukraine issued a resolution of 24.01.01 No 50 “General requirements on the treatment, utilization, elimination or further use of withdrawn from circulation unsound and hazardous products”; and  
- The Cabinet of Ministers of Ukraine issued a resolution of 26.07.01 No 915 (amended 26.07.02 No 1084) “On the introduction of the system for wastes collection, sorting, transportation, treatment and utilization as secondary raw materials”.

#### *Incentives*

- The Cabinet of Ministers of Ukraine adopted the Resolution on the levies for waste disposal on the landfills (1999); and  
- The Ministry of Environment and Natural Resources issued an Order No 181 of 15.05.2001 “On the adoption of the provisional method for the determination of expected losses from the environment pollution during the transportation of hazardous substances and wastes”.

#### *Industry*

Preparatory activity for inventory and certification concerning waste generation is continuing by industries. The results of it will be used for the development of wastes generation decrease plans.

#### *Others*

- On the basis of (iv) the Oblast (Regional) Administrations will identify the whole quantity of waste generated in the region and develop the regional plan on the waste generation decrease measures. This plan must be adopted by the Regional Council; and  
- Beginning from the 1994 a number of educational measures was held in Ukraine (seminars, training courses) under the sponsorship of Lund University (Sweden), IDRC-AGRA (Canada), The World Bank, TACIS (Tebodin, ERM), etc. This activity is continuing.

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### *UN Region: Latin America and the Caribbean*

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### **Argentina**

#### *Year*

2007

#### *Policies*

Hazardous wastes Generators listed in the “National Register of Generators and Operators of Hazardous Wastes” must present a plan to reduce the generation of hazardous wastes by means of change of technology; and recycling, when it is possible, in an environmentally sound manner. This requirement is in line with provisions of Article 17 of National Law 24.051.

The Environmental Authority (Competent Authority) has designed a National Plan of Reduction and Elimination of PCB’s, enacted by National Law 25.670 and Decree 853/07.

Additional Plans of Elimination (POPs and PTS, such as mercury compounds and products such as batteries) are under preparation.

**Legislation** National Law 24.051, Executive Decrees 831/93 and 181/92.

**Incentives** Environmental Tax for generators of hazardous wastes and hazardous wastes treatment plants; this tax is proportional to the quality and quantity of hazardous waste generated.

**Industry** In accordance with National Law 25.670, industries shall gradually replace used PCB from devices until 2010 in order to eliminate the generation of hazardous wastes due to the use of these substances.

**Others** Creation of the necessary administrative structure for the "Basel Convention Regional Center for Capacity Building and Transfer of Technology for the South America Region" (BCRC-Argentina).

## **Barbados**

**Year** 2007

### **Policies**

The Policy Paper for Chemical Management was recently reviewed and updated. The paper is now entitled "Policy Paper: Management of Toxic Chemicals and Hazardous Waste". The policy paper now provides a policy statement and policy objectives for the management of hazardous waste. The overall aim would be to achieve life cycle management of chemicals and hazardous waste generated locally. The paper mainly makes provisions for shipment of hazardous waste off shore to certified facilities.

### **Legislation**

The "Policy Paper: Management of Toxic Chemicals and Hazardous Waste" identifies four broad areas for legislative development. These areas are Import/Export/Re-Export; Handling and Transport; Business Operation; and Disposal.

### **Incentives**

### **Industry**

### **Others**

## **Belize**

**Year** 2007

### **Policies**

**Legislation** Environmental Protection Act (Effluent Limitations) Regulations  
Environmental Protection (Pollution) Regulations

### **Incentives**

### **Industry**

### **Others**

## **Bolivia**

**Year** 2007

**Policies** Se ha preparado un Plan Nacional de Implementación sobre el Convenio de Estocolmo, en el mismo se ha considerado otros convenios que están relacionados, como el Convenio de Basilea y Rotterdam. Dicho Plan Nacional considera 8 pilares de los cuales dos están relacionados con los tratamientos que se deben dar a los desechos de los COP's.

**Legislation** Para el área agrícola se ha emitido una Resolución Administrativa, mediante la cual

prohíben la introducción, uso y manejo de plaguicidas COP's. A la fecha se viene trabajando en una normativa específica de COP's en Bolivia. Asimismo se ha preparado guía para técnicos que están relacionados con el manejo de PCB's, pero el mismo aún no ha sido impreso.

**Incentives** ninguno.

**Industry** La Cámara Nacional de Industrias después de iniciar actividades con un proyecto para la prevención de la Contaminación Ambiental, posteriormente se logro crear el Centro de Promoción de Tecnologías Limpias (CPTS), a la fecha el CPTS, funciona con apoyo internacional como una asociación civil sin fines de lucro.

**Others**

**Brazil**

**Year** 2007

**Policies** -The National Environment Council is discussing policy projects dealing with civil construction wastes, incinerators, landfilling procedures and mercury fluorescent lamp wastes;  
-The National Environment Council is discussing a national waste policy project that will be submitted to the National Congress; and  
The State Industrial Wastes Inventory is being implemented in 12 of the major waste generator States in Brazil.

**Legislation** a) Law nr. 7802/1989 and Regulation nr. 4074/2002 - Agro toxic  
b) Resolution CONAMA nr. 375/2006 and 380/2006 - Sewage sludge  
c) Resolution CONAMA nr. 357/2005 - Liquids effluents  
d) Resolution CONAMA nr. 358/2005 - Health Care Wastes  
e) Resolution CONAMA nr. 362/2005 - Lubricant oil or contaminated  
f) Resolution CONAMA nr. 348/2004, 09/1988 and 07/1987 - asbestos  
g) Resolution CONAMA nr. 316/2002 - Thermal treatment of wastes system  
h) Resolution CONAMA nr. 313/2002 - National inventory of industrials solid wastes  
i) Resolution CONAMA nr. 307/2002 - Civil construction wastes  
j) Resolution CONAMA nr. 301/2002 - Tires  
k) Resolution CONAMA nr. 264/1999 - Co-processing of wastes  
l) Resolution CONAMA nr. 258/99 - Tires  
m) Resolution CONAMA nr. 257/1999 - Pile and battery  
n) Resolution CONAMA nr. 05/1993 - Wastes of ports, airports and rail/bus terminal  
o) Resolution CONAMA nr. 08/1991 - Ban importation of wastes for incineration and final disposal  
p) Resolution CONAMA nr. 06/1991 - Wastes of ports, airports and rail/bus terminal  
q) Resolution CONAMA nr. 02/1991 - Treatment and final disposal of deteriorated, contaminated, out of specification or abandoned cargoes  
r) Resolution CONAMA nr. 1A/1986 - Hazardous wastes transportation

Obs.1 - Items a - b - c - d - e - f - g - h - I - j - k - l - p - q still waiting for translation. Asap we will send the resolutions.

Obs.2 - Items m - n - o - r attached.

In process of discussion:

Mercury fluorescent lamp wastes

Interstate movement of hazardous wastes

Polluted air emission of fixed source

Contaminated area management

**Incentives** ICMS ecológico (State VAT)  
IR ecológico - Ecological tax revenue in discussion in the National Congress

**Industry** Several industries, amounting almost 200 now, have been awarded with the ISO 14000 series certification.  
Cleaner Production and Eco-efficiency Programs. Initiatives and actions for reduction of waste production in the industrial process.

**Others**

**Colombia**

**Year** 2007

**Policies** On December 16 of 2005, the National Environmental Council approved the Environmental Policy for the Integrated Management of Hazardous Wastes, which has as objective prevent the production of Hazardous Wastes and the promotion of the adequate environmental management of those originated, reducing the risks to human health and environment contributing to a sustainable development.

The following are the specific objectives of this Policy:

To prevent and minimize the generation of Hazardous Wastes. This objective intends to prevent the origination of Hazardous Wastes by the promotion and implementation of cleaner production strategies in priority sectors, this Policy also promotes that all productive sectors develop actions that conduct to the reduction of the quantity and dangerousness of this Hazardous Wastes, taking in account the technical, economic and environmental viability. This objective will be developed in an articulated way with the strategies established in the Cleaner Production Policy and in the Hazardous Wastes Integrated Management Policy.

To promote the operation and the integrated management of Hazardous Wastes. This objective is orientated to encourage that each of the upcoming stages of the integrated management, be developed in an environmental secure manner and that the utilization and valorization be fomented as a way to operate the Hazardous Wastes so that they can be reincorporated into the productive processes from an environmental, economic and social feasible perspective.

To implement the commitments of the International Agreements which Colombia ratified considering Hazardous Wastes. Taking in account that the commitments of the Basel Convention are included in the objectives of this Policy, this specific objective is orientated to the harmonization, cooperation and the application of strategies and actions that are directed to the accomplishment and implementation of the National Plan for the Application of the Stockholm Convention and the Plan for the Elimination of the use of Ozone Depleting Substances and their wastes in accordance with the Montreal Protocol.

Strategies for Integral Management of Hazardous Wastes:

a) The action Plan of the Environmental Policy for the Integrated Management of Hazardous Wastes includes the following goals and strategies

First objective: To Prevent and minimize the generation of Hazardous Wastes

Goal: reduce the emergence of Hazardous Wastes in a 5% (this goal can be adjusted in accordance with the information base line that will be defined in the first years of the implementation of this Policy)

Strategies

To prevent the origination of hazardous wastes promoting and implementing the cleaner production strategies; reducing the generation of Hazardous Wastes from the source by the formulation and implementation of the Integrated Management Plans of Hazardous Wastes.

Second objective: Promote the operation and integrated management of the originated Hazardous Wastes.

Goal: Increase in a 10% the offer of the services to operate the Hazardous Wastes and to promote the environmental sound management of three prioritized waste stream for the country.

Strategies

Promote the exploitation and valorization of Hazardous Wastes; management of the Hazardous Wastes that come from the massive consumption of products with a dangerous characteristic and, the promotion of the treatment and the final disposition of Hazardous Wastes in an environmental secure manner.

Third objective: To Implement the international commitments related with Hazardous Wastes.

Goal: Formulation of the National Plan for the Application of the Stockholm Convention and two (2) action plans for the elimination of the Persistent Organic Pollutants – POP – and the wastes polluted with Ozone Depleting Substances – (ODS).

Strategies

Preparation and adoption of the National Program for the Application of the Stockholm Convention on Persistent Organic Pollutants – POP; prevention of the contamination and the operation in polluted places; the Environmental Sound Management of wastes polluted with Ozone Depleting Substances – (ODS).

b) Policy Guidelines for pesticide Management and Use:

The main objective of this Policy Guidelines is the articulation of the efforts of the environmental organizations with farming sector development policies. In this Policy Guidelines, programs for the suitable handling and packaging of pesticides were developed jointly with the private sector.

Centers for Storage and Reception of Discarded Pesticide Packages: Twelve (12) storing centers were set up for the reception of packages contaminated with pesticides in sectors and high-priority regions, within the framework of the Agreement for Cleaner Production with the producers of pesticides.

c) Model of Integral Management of Hospital Wastes (2002):

Decree 2676 of 2000 established that generators of hospital wastes and providers of special services of decontamination and cleanup of this type of wastes, have the legal obligation to prepare an internal Institutional Plan for the handling of this kind of wastes. The Plan should integrate principles for continuous improvement. Since the promulgation of the decree, 10 projects were implemented in the cities of Santa Marta, Barranquilla and Cartagena. With the purpose of improving enforcement of existing regulations, sanitary and environmental authorities were trained in 10 cities nationwide and a Handbook on Procedures for Integral Management of Hospital wastes was published (2002).

### ***Legislation***

Regulations:

-Law 1159 of 2007, which approved the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in

## International Trade

- Resolution 0062 of 2007, issued by Institute of Hydrology, Meteorology and Environmental Studies (IDEAM), which adopted the national protocols for sampling and lab analysis for physicochemical characterization of hazardous wastes
- Resolution 693 of 2007 issued by Ministry of Environment, Housing and Territorial Development, which regulated criteria and requirements that must be considered for management plans for the return of wastes generated after consumption of pesticides (e.g. remainders, recipients, packing, unused products)
- Resolution 1362 of 2007 issued by Ministry of Environment, Housing and Territorial Development, which sets the requirements and procedures for the Register of producers of hazardous wastes
- Decree 4741 of 2005, issued by the National Government, "by which the prevention and management of Hazardous Wastes are partially regulated in the framework of integrated management "
- Resolution 1446 of 2005 and resolution 415 of 1998, establish cases and conditions for the authorization of combustion of used oils
- Decree 1443 of 2004, by which the prevention and control of the environmental contamination by the handling of pesticides and residues or hazardous residues is regulated.
- Resolution 1164 of 2002, which adopted a handbook on procedures for the integral management of hospital and similar wastes in Colombia.
- Decree No. 2676 of 2000, which regulates the integral management of hospital and similar wastes. The Decree includes the principles of biosafety, integral management, minimization, the non-garbage culture, prevention and use of clean technologies, as well as the precautionary principle.
- Resolution 1096 of 2000, issued by the Ministry of Industry and Development, which establishes the technical requirements for the management and final disposal of other types of waste and general guidelines about hazardous wastes.
- Law 430 of 1998, which establishes regulations related to environmental issues referring to Hazardous Wastes.
- Ratification of Basel Convention, it was approved by Law 253 of 1996.
- Decree 605 of 1996 and Decree 1713 of 2002, which further regulate Law 142 of 1994 regarding sanitation public services
- The Law 99 of 1993 (Article 52, paragraph 8) establishes that an Environmental License (authorization), is required previously to the import of pesticides, substances and materials or products subject to control by Environmental Multilateral Agreements;
- Resolution 2309 of 1986, issued by the Ministry of Health, which establishes rules for "special wastes", that are pathological, toxic, flammable, explosive, radioactive or volatile.

## Guidelines:

Guideline "Integral management of residues or hazardous waste conceptual fundamentals"; Ministry of Environment, Housing and Territorial Development publication (2007). This document is a tool to orientate and contribute training to local and regional authorities about environmental sustainable management of hazardous waste. Those authorities have to prepare and implement plans that promote the environmental management considering priorities defined.

Technical Handbook for the management of used lubricating oils.

It includes technical aspects of the different stages of management, (collection, packing, storage, transport, treatment and final disposal), which must be applied for

the protection of the human health and the environment.

Environmental Guideline for Battery Producers and Recoveries (1998)

The objective of this Guideline, elaborated by the Regional Environmental Authority of Cundinamarca (CAR), is to promote and facilitate the adoption of environmental management systems in small and medium sized industries. It also seeks to supply the small entrepreneurs with the technical and operative tools to design an Environmental Management Plan oriented at minimize the environmental impacts of the wastes generated during their productive activities and promoting the rational use of natural resources.

The Guideline contains information on: the sanitary, environmental and health effects of the activities involved in battery recuperation; the valuation of impacts; and the conceptual, methodological and procedural parameters for the elaboration of an Environmental Management Plan.

Handbook on PCB Handling for Colombia (1999)

The purpose of the manual is to help the proprietors of PCBs (e.g., companies, governmental entities, individuals, etc., that own PCB equipment, oil contaminated with PCB or any other PCB waste) and those who may have responsibility in the handling of PCBs in view of protecting the environment and the human health.

Handbook on procedures for the Integral Management of Hospital Residues (2002).

This handbook considers internal and external component of hospital residues, with emphasis in strategies of automatic control, clean technologies and rational use of resources, concerted with the different stakeholders.

Environmental guides of Storage and Transport by Highway of Dangerous Chemical Substances and Residues (2003).

These guides arise as an initiative to create awareness for those who are involved in the activities of storage and transport of this type of materials, with the aim of highlighting environmental aspects to be considered in their execution.

Guides for Safe Handling and Environmental Management of 25 Chemical Substances (2003).

25 high-priority chemical substances in Colombia were selected and a guide for safe handling and environmental management was prepared for each one, with an informative network that serves as a base to acquire the general knowledge of each one of these substances, with respect to its properties, characteristics of danger, effects on the health, measures of prevention and response to emergencies.

Other elaborated guidelines are:

- Guidelines of Best Environmental Practices for the sector of Graphical Arts
- Guidelines of Best Environmental Practices for the sector of Galvanoplasty
- Guidelines of Best Environmental Practices for the Textile sector
- Guide of Cleaner Production for the Sector of Electrolytic Coverings in Colombia
- Environmental guides for the sub- sector of Pesticides (storage, transport, aerial and terrestrial application, handling of packages and remainders)
- Guide of Cleaner Production for the Health Sector

### *Incentives*

Law 141 of 1994: it establishes the National Fund of Royalties financed by resources from the exploitation of hydrocarbons, in which part of the resources are used for environmental local projects, focused on the development integral solid

residues and residual waters management;

Law 142 of 1994, on utilities (water, electricity etc.), establishes tariffs based on the weight and volume of the consumed resources, which therefore constitutes an economic incentive to minimize the generation of wastes;

Law 223 of 1995, exempts payment of the sales tax for the national and imported equipments, when they are intended to be used and in general for control and monitoring of pollution.

Law 511 of 1999, establishes the national day of the recycling people and the activity of recycling, and the Decree 2395 of 2000 sets an award for the persons who are involved in recycling in the categories of industry, investigation, Organizations covering people who are active in recycling, and workers in the public cleaning service.

Decree 2532 of 2001: Exempts from Added Value Tax (AVT) sales of equipment or machinery used for the development of actions oriented to obtain measurable results of the diminution of the demand of renewable natural resources and of prevention and/or reduction of the volume and/or the improvement of the quality of the liquid residues, emissions or solid residues.

Law 788 of 2002, establishes an income tax exemption of up to a 20% to the natural or legal person investing in environmental improvement and control.

### *Industry*

During 2006, according Decree 4741 of 2005, the generators of hazardous wastes started the formulation of their Integral Management Plans to prevent and minimize the hazardous wastes in the source, and the rational ecologic management and elimination such wastes. It promotes the self-management in the productive activities.

At the same time, local and regional environmental authorities are formulating Integral Management Plans of hazardous wastes in their jurisdiction to promote the accomplishment of the reduction of the amount of hazardous waste goals.

Conventions for Cleaner Production: These are voluntary agreements that support concrete actions for the improvement of public and private sectors management; they are directed to the prevention and control of pollution. This objective is to be reached by the adoption of cleaner production and environmentally safer and healthier processes. It aims at the reduction of pollution levels and risks to the environment in industrial activities, by the optimization of the use of natural resources and the improvement of internal and external industrial competitiveness.

The cleaner production agreements have established inter-institutional working teams with the participation of the Ministry of the Environment, other Ministries, the regional and local environmental authorities, the private sector and, in some cases, the civil society. The conventions have created new spaces for dialogue and coordination amongst the actors involved in the analysis of environmental issues, which contributes to the establishment of rules and policies for a more transparent environmental management, and to the definition and accomplishment of the goals related to environmental improvement.

In addition to it above mentioned, these conventions anticipate action related to

environmental rules and accelerate the reduction of the pollutant emissions, and to the definition of environmental management priorities, sectorial policies and goals. To the present date, 20 of these national conventions have been signed, 14 of which are sectorial and 6 are regional.

Instruments for the adoption of Voluntary Codes of Environmental Management:

-The Cleaner Production Policy considered, as instruments for the promotion of such cleaner production, the adoption of voluntary codes of environmental management as initiatives of producers, oriented to the continuous improvement of environmental management, based on schemes of self-regulation and self-management.

At the moment three regional environmental authorities have implemented programs of recognition to the improvement in management and environmental performance.

-In Colombia several enterprises are adopting voluntary codes, such as Responsible Care, and other corporate codes.

-In order to promote these initiatives, the Ministry of Environment, Housing and Territorial Development, has also set up the "National Program of Recognition of Excellence and Leadership in Environmental Management and Performance".

Specifically the program aims to:

-Improve compliance beyond standards established in the environmental legislation

-To improve management and environmental performance indicators.

-To publicly recognize and to encourage the continuous improvement in management and environmental performance

-To publicly recognize and to encourage commitment, leadership and environmental excellence

-To recognize and to encourage the adoption of cleaner production

-To recognize and to encourage the improvement of competitiveness. One of the mechanisms through which the MAVDT has set out to encourage the companies for the inclusion of environmental criteria within their production, is by environmental certification schemes.

The Ministry (MAVDT) has been working in the structuring of a national eco-labeling system with the purpose of encouraging supply and demand of environmentally friendly products and services by differentiating these products, to facilitate their access to the market and to promote the use of clean or sustainable processes, techniques and technologies. The environmental criteria for the certification will have to be additional to the requirements established by the legislation.

#### *Others*

Preliminary Inventory of Polychlorinated Biphenyls PCBs (2006). The principal subjects of this inventory were,

-to quantify the existences in the country of oils, equipments and residues which are contaminated with PCBs;

-to determine the geographic location and the present conditions of handling of those existence,

-to establish the guidelines of rational ecologic management.

Preliminary Inventory of obsolete pesticides and burials of pesticides:

With the purpose of designing viable solutions to the serious problems associated to the inadequate historical handling of pesticides, a preliminary inventory of obsolete pesticides and burials of pesticides was completed in regions with agricultural tradition, with the support of the FAO. In the same way and under schemes that the

Basel Convention provides, an action plan for the elimination of one of the most serious storage of obsolete pesticides in the country, located in the Copey - Cesar, was designed, which will allow its definitive management.

Regional Strategy for the environmentally sound management of used lead-acid Batteries in Central America and the Caribbean. Colombia participated in the formulation of this Strategy.

## **Costa Rica**

**Year** 2007

**Policies** Policies

- Risk to control any factor related with contamination, insecurity and danger to the environment, the human health and life of the population;
- Prevention, mitigation and response to the population needs in disaster situations
- Assure the quality of potable water at a national scale; and
- Technical and sanitary management of solid, organic, biological, radioactive and toxic wastes, among others, in health, industry and commerce facilities, and houses.

**Legislation** General Health Law of Costa Rica

Strategies:

- Strengthening of sanitary regulation based on main standards and technical recommendations;
- Sanitary monitoring on achieving sanitary regulations; and
- Development of scientific research towards the protection and the improvement of human environment.

**Incentives** None.

**Industry**

- Application of some environmental principles (sustainable development, precautionary principle, preventive principle); and
- Development of some mechanisms to reduce the generation of wastes in the starting point.

**Others**

## **Cuba**

**Year** 2007

**Policies** Promoting the use of cleaner productions.  
Using cement kilns to eliminate hazardous wastes (Y2, Y3 and Y8).

**Legislation** National Guidelines for Y8, Y9, Y1, Y2, and Y3 wastes.  
Resolutions 32/2005 and 73/2006

**Incentives**

**Industry** Recovering and recycling.  
Using of existing national facilities.

**Others** New industries are using technologies which are reducing pollution and some technological changes in older industries are being made in order to reduce waste generation.

## **Dominican Republic**

**Year** 2007

**Policies** In the country unique used oil residues are eliminated. No other dangerous remainder is treated within the country. A regulation for the handling of used oils exists.

The Sub secretariat of Environmental Management is the institution responsible for imposing penalties on companies that generate wastes and do not manage them in an environmentally sound manner.

Administrative Sanctions like:

- a) Fines
- b) Activities Restrictions
- c) Objects Appropriation
- d) Temporal Suspections or provisional prohibits of activities that generated environment damaged or risk.

**Legislation** Application of the law 64-00, Articled 97-105 concerning to Substances and Hazardous Products Manner.

Title V / Reference to "Judgmental and sanctions in administrative Material"  
Chapter II / Reference to "Administrative Sanctions".

National Norm for the Environmental Management of remainders non dangerous that was edited in Santo Domingo, Dominican republic on June 2003 by thee Secretary of State of Environment and Naturals Resources.

**Incentives** Economic instruments are not applied at present. Initiatives contemplated in Law 64-00 are had, 70 Art.s pag. 60.

**Industry** Some industries manage their own wastes (they have treatment plants), others send their wastes to another country for disposal, and others engage in publicity campaigns for the conservation of the environment.

**Others**

**Ecuador**

**Year** 2007

**Policies**

- Action Plan for the implementation of the National Regimen for Hazardous Chemical Products;
- Application of regulations about clinical wastes;
- Development of policies for cleaner production; and
- National Policy of solid waste.

**Legislation** National Regimen for Hazardous Chemical Products;  
Regulation on clinical wastes;  
Regulations about storage, transport and handling of dangerous chemical products;  
Regulations about hazardous industrial chemicals, precautionary labeling, specifications;  
Regulation for prevention and control of contamination of dangerous hazardous wastes;  
National list of chemical products controlled & severely restricted by Environmental Ministry and National List of chemical products banned in Ecuador;  
Interinstitutional Cooperation and Coordination Committee for residue management;  
Ordinance management oil wastes  
Management System for hazardous wastes.

**Incentives**

**Industry**

- Chemical industry is implementing the Responsible Care Program;
- Implementation of the Cleaner Production Center in Ecuador; and
- Some enterprises have adopted the ISO 14000.

**Others**

## **Guatemala**

**Year** 2007

**Policies** There is a voluntary programme for making better use of waste oil, involving its collection by the oil companies and disposal as an alternative fuel in the Cementos Progreso cement factory, which has high-temperature furnaces.

**Legislation** Article 2 of the Regulations for the Management of Solid Hospital Wastes regulates “issues relating to the generation, classification, storage, transport, treatment and disposal of hospital wastes categorized as toxic, radioactive or liable to spread pathogens, as well as wastes produced in the normal activities of human or animal health-care centres, such as public and private hospitals, clinics, laboratories or any other human or veterinary health-care establishment”.

**Incentives** Subparagraph v, paragraph 3 of Article 45 of Administrative Order 23-2003, Environmental Assessment, Monitoring and Follow-up, assigns a penalty charge of 0.05 units (100 quetzals) per kilogram for each kilogram of materials imported for recycling, equivalent to US\$ 0.63 per kilogram; the measure is intended to reduce the amount of hazardous residues entering the country as materials for recycling (for example, used tyres).

**Industry** There are programmes jointly developed by the private sector and the Government, promoted by the cleaner production centre in Guatemala, such as the programme entitled “Cleaner and more productive companies of Guatemala”, which, in the case of some hazardous wastes, seeks to reduce, eliminate or dispose of them in a safe manner. There are other industries that are engaged in ISO 9000 and ISO 14000 certification programmes.

**Others** The Chemical Information Exchange Network has just been set up, with the objective of developing a network for information exchange between State and private institutions, to publicize research information and projects, in relation to the Basel Convention, the Stockholm Convention, the Rotterdam Convention and the Montreal Protocol.

## **Guyana**

**Year** 2007

**Policies** -Collection of data (relating to mercury and other substances).  
-Consultancy to develop a National Hazardous Waste Inventory and Management Strategy ( UNDP Funded-Currently sourcing technical assistance)

**Legislation** -Implement Environmental Protection Hazardous Waste Regulations 2000 under the Environmental Protection Act.;  
-Implement Mining Environmental Regulations which address hazardous waste from mining activities e.g mercury and cyanide;  
-Implement Pesticides and Toxic Chemicals Act; and  
-Develop guidelines and codes of practice for certain wastes such as Asbestos, Mercury, etc.

**Incentives**

**Industry** -Industries (distributors) collect certain waste such as used batteries and return to suppliers; and  
-Storage of some hazardous materials is practiced until proper disposal can be done.

**Others** -EPA funded by IDB conducted a Needs Assessment for the hazardous waste sector and developed an Implementation Plan at the Agency level; and  
-Possibility of having a hazardous waste component in a new landfill site is being explored.

## **Honduras**

**Year** 2007

**Policies** - Development of the National Implementation Plan for the Persistent Organic Pollutants which include a PCBs and pesticides inventory (2007-2008).  
- Inventory of POPs pesticides specifically 15 tons of DDT pesticide to be exported and disposed internationally.

**Legislation** - Stockholm Convention on Persistent Organic Pollutants  
- Health code  
- Penalties code  
- General Law on Environment  
- A regulation for the hazardous wastes is in preparation

**Incentives** Central America and Dominican Republic Free Trade Convention (CAFTA-DR)

**Industry** - Some industries implement the Cleaner Production, ISO 14000.  
- Participation of the National Electric Company (ENEE) in the development of PCB inventory (public sector)

**Others** - Industrial initiative for the energetic valorization through wastes in cement heat chambers.

## **Jamaica**

**Year** 2007

**Policies** Policies:  
National Policy and Strategy for the Environmentally Sound Management of Hazardous Wastes Management Policy (draft);  
National Policy and Strategy for Environmental Management Systems (draft);  
and  
National Solid Waste Management Policy.  
Policy for Environmental Stewardship of Government Operations

**Legislation** National Solid Waste Management Act.

**Incentives** Effective June 1, 2007, Jamaica instituted an environmental levy of 0.5% of the CIF value of all imports. This levy will, inter alia, assist in financing national wastes management projects and programmes.

**Industry** Some private sector entities have instituted environmental management systems (EMS).

**Others**

## **Mexico**

**Year** 2007

**Policies** To adapt and to complete the Legal Framework according with the General Law for Prevention and Integral Management of Wastes, for example: During biennium 2006-2007, Mexico orchestrated the management of hazardous wastes looking for on the one hand, to privilege the minimization of the generation of these or to valorize such.

To foment and to establish the mechanism for the registry of handling plans of hazardous wastes.

Development and support of capacity building for the handling of hazardous wastes at national level to minimize the transboundary movements;

Implementing at national level the Convention amendments relating to

transboundary movements of hazardous wastes among signatory countries;

Prohibition for importing hazardous wastes which objective is the final disposal.

**Legislation**

General Law of Prevention and Integral Management of Wastes, published in the Official Newspaper of the Federation the 08 of October of 2003; It will operate as of January 2004

General Law of Ecological Equilibrium and Environmental Protection (LGEEPA);•LGEEPA regulations on hazardous wastes;

Specific Regulation about the General Law of Prevention and Integral Management of Wastes, published in the Official Newspaper of the Federation in November 30 of 2006.

Development of technical guides for hazardous wastes sound management within the Basel Convention framework (PCB, Leads Batteries, Electronic Wastes, etc).

**Incentives**

The Economy Secretariat operates the program that regulates industries and commerce, the deregulation of the Industry Assembly (Mexican assembly plants located near the USA-Mexican boarder where most production is exported to the United States) to avoid the wastes return to the country of origin (Exemption: IMMEX\* before PITEX & MAQUILA)

\* IMMEX is a Decree for Foment of the Manufacturing Industry, Assembly plant and of Services of Export (Decree IMMEX), with the objective to fortify the competitiveness of the Mexican exporting sector, and to grant certainty, transparency and continuity to the operations of the companies, needing the fulfillment factors and simplifying them; allowing them to adopt new forms to operate and to make businesses; to diminish its logistic and administrative costs; to modernize, to make agile and to reduce the proceedings, with the purpose of elevating the capacity of control in surroundings that encourage to the attraction and retention of investments in the country. This Integra instrument the programs for Foment and Operation of the Industry Assembly plant of Export (It assembles) and the one that Establishes Programs of Temporary Import to produce Articles of Exportation (PITEX), whose companies represent as a whole 85% of the manufacturing exports of Mexico.

**Industry**

Some industrial and generating groups have chosen to implant voluntary systems that allow to reduce the generation of hazardous wastes.

Development and implementation of handling plans of hazardous wastes.

Technology development to treat the hazardous wastes in situ or ex situ.

To annually report the handling of hazardous wastes by means of the called instrument Certificate of Annual Operation.

**Others**

**Panama**

**Year**

2007

**Policies**

Los Desechos Peligroso esta actualmente bajo las Estrategias Presidenciales del nuevo Gobierno, por lo tanto la gestión de los desechos Peligrosos hospitalarios como los comunes, y ambos a su vez están contemplados dentro del Plan de

Implementación del convenio de Estocolmo de Panamá.

**Legislation** Decreto Ejecutivo 293 del 23 de Agosto del 2004 Que Norma los Sistemas de la Incineración y Coincineración de los Desechos.  
Decreto Ejecutivo 116 del 18 de Junio del 201 Que aprueba el Manejo de los Desechos Internacionales No Peligrosos en Puertos

Ley 21 del 1990 Por el Cual se aprueba el Convenio de Basilea de Movimientos Transfronterizos de Desechos Peligroso y su Eliminación

Ley 3 del 20 del 1 del 2003, Que aprueba el Convenio de Estocolmo sobre Contaminante orgánicos persistentes.

Decreto Ejecutivo 249 de febrero de 2008, señala que el productor de un medicamento o sustancia química vencida es el dueño del producto y debe ser enviado nuevamente al país de origen.

**Incentives**

1. Se tiene una coordinación institucional, empresa privada y ONGS en materia de sustancia y desechos peligrosos.
2. Creación de la Comisión Institucional e Interinstitucional de Sustancia Químicas.
3. Promover la capacitación del personal técnico, ONG y empresa privada en este tema.
4. Intercambio de Información con las Autoridades Competentes de los otros países que forman parte del Convenio de Basilea.

**Industry** Actualmente Panamá, tiene un alto incremento en actividades de producción más limpia en las industria de servicio y producción.

**Others**

**Saint Lucia**

**Year** 2007

**Policies** Continued collaboration with private sector on measures to reduce quantity and toxicity of hazardous waste generated; project proposal for the management of used lead acid batteries approved with St. Lucia chosen as one of the pilot countries; some training and capacity building in the areas of hazardous waste management (PCBs) conducted; consultant report on Hazardous Wastes conducted to inform training needs and further policy development for reduction and/or elimination of hazardous wastes generated at the national level; and management plans have been developed for the following categories of hazardous waste:  
Waste oil, Spent agricultural chemicals, Biomedical waste, Asbestos, ULABs.

A national system for the collection, treatment and disposal of biomedical waste has been developed and its implementation is ongoing.

**Legislation**

- Waste Management Act #8 of 2004
- Draft standards for Management of Biomedical Waste, Material Recovery Facility
- Draft Biomedical Waste Legislation has been developed and national consultations have been held to discuss its finalization.

**Incentives** Provision of tax incentives and waivers of import duties on equipment and materials required for recycling and reuse of used oil and also on the used oil received from ships.

**Industry** Efforts by private industry to conform to ISO, HACCP and other relevant international trade standards to reduce the quantity and toxicity of hazardous waste generated. Management plans instituted by large generators to reduce negative environmental impact.

**Others**

## **Trinidad and Tobago**

*Year* 2007

*Policies*

Only for domestic solid waste.

*Legislation*

Legislation in preparation.

*Incentives*

Economic instruments in preparation.

*Industry*

Individual companies have used their own in house practices to reduce/minimize the waste.

*Others*

## **Uruguay**

*Year* 2007

*Policies* No information available.

*Legislation* No information available.

*Incentives* No information available.

*Industry* No information available.

*Others* No information available.

## **Venezuela**

*Year* 2007

*Policies* La Ley Sobre Sustancias, Materiales y Desechos Peligrosos establece en el Artículo 14. indica que el Estado apoyará e incentivará las acciones de las personas naturales o jurídicas que conlleven a la recuperación de los materiales peligrosos recuperables y la adecuada disposición final de los desechos peligrosos, así como el desarrollo de aquellas tecnologías que conduzcan a la optimización de los procesos y a la minimización de la generación de desechos peligrosos mediante incentivos económicos o fiscales, siempre que se mejoren los parámetros de calidad ambiental establecidos en la reglamentación técnica, a fin de minimizar los riesgos a la salud y al ambiente. La recuperación y disposición final de los desechos peligrosos son una responsabilidad compartida del Estado y de los particulares.

*Legislation*

Se cuenta con el Decreto N° 2635, Normas para el control de la recuperación de materiales peligrosos y el manejo de los desechos peligrosos (Gaceta Oficial Extraordinaria No 5245 del 3 de agosto de 1998), y se Ratificaron dos convenios internacionales:

- Convenio de Róterdam sobre el Procedimiento de Consentimiento Fundamentado Previo a Aplicable a Ciertos Plaguicidas y Productos Químicos Peligrosos Objeto de Comercio Internacional, (Gaceta Oficial No 38092 del 22 de Diciembre de 2004).
- Convenio de Estocolmo sobre Contaminates Orgánicos Persistentes, (Gaceta Oficial N° 38.098 del 3 de Enero de 2005).

Además, Venezuela Ratifico la Agenda 21 sobre la Gestión ecológicamente racional de los desechos sólidos y cuestiones relacionadas con las aguas cloacales, donde la gestión ecológicamente racional de los desechos debe ir más allá de la simple eliminación o el aprovechamiento por métodos seguros de los desechos producidos

y procurar resolver la causa fundamental del problema intentando cambiar las pautas no sostenibles de producción y consumo. Ello entraña la aplicación del concepto de gestión integrada del ciclo vital que representa una oportunidad única de conciliar el desarrollo con la protección del medio ambiente.

***Incentives***

La Republica Bolivariana de Venezuela está promoviendo políticas, donde se prevé una disminución en el impuesto sobre la renta, tal como lo señala la Ley de Impuesto sobre la Renta (Gaceta Oficial N° 3828 del 16 de Febrero de 2007), En el Artículo 57. Se concederá una rebaja de impuesto del diez por ciento (10%), adicional a la prevista en este artículo del monto de las inversiones en activos, programas y actividades destinadas a la conservación, defensa y mejoramiento del ambiente.

***Industry***

***Others***

Some companies are modifying their process or bringing in new processes aimed at cleaner production.